



# NIKE, INC. CHEMISTRY PLAYBOOK & RESTRICTED SUBSTANCES LIST

RESPONSIBLE SUPPLY CHAIN  
May 2023







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# CHEMISTRY AT NIKE

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# CHEMISTRY AT NIKE

From the early efforts of Bill Bowerman, NIKE, Inc.<sup>1</sup> original innovator, to our ongoing obsession with creating exceptional and innovative product, effective and responsible use of chemistry elevates Nike's product performance and shapes manufacturing on a global scale.

## ABOUT THE NIKE CHEMISTRY PLAYBOOK

This legacy influences our perspective on the positive role chemistry plays in creating products for global athletes.

Chemistry is the foundation of our materials. We recognize that it must be effectively and responsibly managed to maximize its value and minimize risks. To accomplish this, we use a chemical prioritization strategy that integrates our approach to regulatory compliance with proactive efforts to scale cleaner chemistry and integrate chemistry into our business as points of innovation, opportunity and efficiency.

Through the adoption of cleaner chemistries, we aim to reduce the overall environmental impact of our chemical footprint by carefully selecting chemicals that align to Nike's internal standards and industry-aligned commitments.

We created the Nike Chemistry Playbook to communicate our cleaner chemistry strategy and to clearly define expectations for suppliers.

## KEY ELEMENTS OF THE PLAYBOOK

The Nike, Inc. Chemistry Playbook & Restricted Substances List highlights Nike's areas of focus:

- Our vision: zero discharge of hazardous chemicals.
- How screening chemistries accelerates the adoption of cleaner chemistries.
- Our expectations for effective and responsible chemicals management within facilities.
- Why it's important to control chemical inputs in manufacturing facilities.
- Why output management, including wastewater and air emissions, is essential for chemistry.
- Chemistry compliance guidance for all materials, products and packaging.

<sup>1</sup> "Nike" means NIKE, Inc. and its direct and indirect subsidiaries, which include portfolio brands and divisions such as NIKE Brand, Jordan Brand and Converse.







# OUR VISION

# ZERO DISCHARGE OF HAZARDOUS CHEMICALS





# CHEMISTRY AT NIKE

## OVERVIEW

Zero discharge of hazardous chemicals is a core component of our company vision to “Move to Zero” — Nike’s journey to help protect the future of sport. In chemistry, we support this vision by ensuring strong compliance requirements across our supply chain and by adopting cleaner chemistry alternatives for priority chemicals across our industry.

This aspiration is bold but we think it is achievable. It requires significant levels of innovation and collaboration — especially in the field of chemistry.

We estimate more than 4,000 chemicals are used in the footwear and apparel industry. Nike is continually optimizing our input chemistries to help meet our cleaner chemistry targets and achieve our goal of zero discharge of hazardous chemicals.

To achieve our vision, new projects and continuous collaboration will need to be defined. Our agile, evolving process will continue through robust, data-driven targets and strong industry collaboration.

## OUR CHEMISTRY STRATEGY

It is a complex process to select cleaner chemistry for a project. Nike’s chemistry strategy targets priority chemicals to achieve the greatest impact.

To set criteria for our strategy, Nike chemical experts consider the health and environmental impacts of the individual chemicals and chemistry mixtures. Our global teams also track the regulatory landscape and new scientific findings to proactively influence transformation of our supply chain. Finally, we look at the scenarios of use, which include volumes, types of application and the availability of alternatives to set realistic targets for the future.

These criteria, and the values that underpin them, enable Nike to efficiently pursue ongoing improvements in priority chemical substitution and/or removal. This allows us to pilot new technologies that may not have been feasible in the past. Chemistry shapes our innovation projects, and these projects represent the future of our supply chain.



**We believe in a fair, more sustainable future — one where everyone thrives on a healthy planet and level playing field.**

## KEY ELEMENTS IN ACHIEVING NIKE’S VISION

- 1 Proactively assess chemicals, identify their impact, and minimize or eliminate the use of less preferred chemistries.
- 2 Phase out or reduce priority chemistries throughout our innovation pathway and our supply chain.
- 3 Increase the use of cleaner chemicals across the industry.
- 4 Expand chemistry data scope and quality to enable better, more efficient decision making.





# CHEMISTRY AT NIKE

## THE CHEMICAL UNIVERSE: MORE THAN 100 MILLION KNOWN SUBSTANCES & 100,000 IN COMMERCIAL USE

When Nike innovates new materials and methods of make, we may find chemicals that are cleaner and perform better than those currently in use. Conversely, during our exploration, we may encounter chemistries that should be avoided. To advance cleaner chemistry, Nike performs a chemical assessment to review incoming chemistries against many different criteria.

However, many chemistries lack complete data about their characteristics. To achieve Nike's vision of a cleaner chemistry future, we need to continuously try to find a wider scope of scientific data and better tools to view and share information. That's why Nike collaborates with other companies and scientific experts to develop methods that enable informed chemical decisions.

### 4,000+ CHEMICALS IN THE NIKE SUPPLY CHAIN

In Nike's supply chain, there are more than 4,000 chemicals potentially in use in a wide number of formulations.











### CHEMICAL HAZARDS

Nike performs chemical assessments to review incoming chemistries against many different criteria. Continuous improvement of processes and materials drives the use of cleaner chemistries.

### CHEMICALS ON THE NIKE RSL

The Nike Restricted Substances List (RSL) restricts hundreds of chemicals that have been regulated or voluntarily phased out of our manufacturing processes. These chemistries are tightly controlled to minimize their use in the supply chain.



Chemical Name	Chemical Structure	Chemical Class	Chemical Formula	Chemical Weight	Chemical Density	Chemical Boiling Point	Chemical Melting Point	Chemical Solubility	Chemical Stability	Chemical Reactivity	Chemical Toxicity	Chemical Hazards	Chemical Restrictions
Monomers													
Acrylonitrile		Acrylonitrile	C <sub>3</sub> H <sub>3.5</sub> N	53.06	0.99	77.3	-33.3	100	Stable	Reactive	Toxic	Flammable	Restricted
Adiponitrile		Nitrile	C <sub>4</sub> H <sub>4</sub> N <sub>2</sub>	108.12	1.20	216.2	-12.6	100	Stable	Reactive	Toxic	Flammable	Restricted
Polymers													
Acrylonitrile		Acrylonitrile	C <sub>3</sub> H <sub>3.5</sub> N	53.06	0.99	77.3	-33.3	100	Stable	Reactive	Toxic	Flammable	Restricted
Adiponitrile		Nitrile	C <sub>4</sub> H <sub>4</sub> N <sub>2</sub>	108.12	1.20	216.2	-12.6	100	Stable	Reactive	Toxic	Flammable	Restricted
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# CHEMISTRY AT NIKE

## NIKE CHEMICAL PRIORITIZATION PROCESS

Nike investigates the chemicals used in our supply chain to continuously improve our in-depth understanding of them. We evaluate our products' material formulations based on:

- The identity and hazard properties of the chemicals used.
- Existing and forthcoming legal and regulatory requirements.
- Our know-how and professional understanding of chemical use — how, where and in what quantities.

This evaluation process enables us to prioritize chemicals that will be progressively phased out in a manner that is relevant, scientifically appropriate and technically feasible. It requires research, testing and capital investment to develop alternatives that meet athletes' rigorous performance standards.

Using this evaluation process, Nike created a list of 10 priority chemistries for which we are working to go beyond the baseline of chemical practices in our supply chain today.

Our success in replacing any of our priority chemicals in favor of cleaner chemical alternatives relies on collaboration with material and chemical suppliers.

As we continue to evaluate the chemicals in our supply chain, we will identify further opportunities to opt for cleaner chemicals in support of our ambition to reduce our chemistry impact.



## NIKE'S 10 PRIORITY CHEMISTRIES

- PFCs/PFAS
- Dimethyl Formamide (DMFa)
- Dicumyl Peroxide (DCP)
- Zinc Pyrithione
- Solvents
- Formamide
- NPEOs
- Bisphenols
- Neoprene
- Formaldehyde





# CHEMISTRY AT NIKE

## EXAMPLES OF OUR 10 PRIORITY CHEMISTRIES

- **PER- AND POLYFLUOROALKYL SUBSTANCES**

Nike completely phased out the use of per- and polyfluoroalkyl substances (PFAS) in durable water-repellent (DWR) finishes in 2022. Close collaboration with material and chemical suppliers made this achievement possible. See page 11 for more information on Nike's work to eliminate PFAS.

- **DIMETHYL FORMAMIDE**

Dimethyl formamide (DMFa) was added to the Nike RSL several years ago to align with regulatory requirements. However, the regulated test limit doesn't preclude the use of DMFa in material production across the industry. As a result, it is a mainstay of synthetic leather production. Nike aims to go beyond compliance requirements for DMFa, and we're working with our top synthetic leather suppliers to adopt DMFa-free technology. We aim to significantly reduce our use of materials containing DMFa, and we're excited to see the pace of innovation from material suppliers.

- **ZINC PYRITHIONE**

Zinc pyrithione has historically been used in some textile manufacturing for odor management. We have targeted zinc pyrithione for removal from our supply chain by 2025.

- **SOLVENTS**

Nike has prioritized reducing the use of organic solvent chemicals for more than a decade and made great strides to minimize their use. We have also set an ambitious target to strengthen our data management and analysis capabilities with an eye towards future restrictions.

As with many Nike targets, data on solvents relies heavily on information from factories about their manufacturing practices and chemical use. This project also requires greater teamwork and validation mechanisms across Nike — from innovation teams to chemical engineers, from supply chain manufacturing experts to technology teams. Together, we created a database that provided visibility into the quantified target area of paints and inks. This provides a data-driven foundation to help achieve our longer-term vision to choose cleaner chemistries.

While this is still in the pilot stage in some areas of manufacturing, our access to visualizations and detailed analysis has skyrocketed. This information allows us to prioritize projects, collaborate more closely with factories located across different regions and model future manufacturing scenarios. We are excited to use this data to support other industry-wide solvent research endeavors and collaborations with Apparel and Footwear International RSL Management (AFIRM) Group, Zero Discharge of Hazardous Chemicals (ZDHC) Foundation and more.

## INNOVATION IN ACTION

To achieve our goals, we must realize improvements through a variety of means: cleaner chemistry, innovative processing and new methods of make. For example:

- **Material efficiency.** Improving material efficiency reduces the volume of chemicals required to create materials, illustrated by our Flyknit and Space Hippy innovations.
- **New approach to odor management.** Exploring a new approach to odor management that avoids the use of antimicrobial technologies.
- **New material processes.** Changing material processes, such as water-efficient dyeing, to reduce chemistry and wastewater effluent volumes, positively impacting waste streams.

Learn more about Nike's innovation mindset on the following pages.





# CHEMISTRY AT NIKE

## ELIMINATING PER- & POLYFLUOROALKYL SUBSTANCES

Nike began removing per- and polyfluoroalkyl substances (PFAS) from our supply chain in 2015 when we phased out C8-based DWR finishes. We kept pushing, making the bold commitment to convert to entirely PFAS-free DWR finishes. We're proud to have met our target and, as of 2022, all DWR finishes used at Nike are entirely PFAS-free.

Achieving our PFAS goals while meeting our performance requirements wasn't easy. We faced many technical challenges, from bonding in footwear to chalk marks on garments. To find solutions, we brought partners from across the supply chain — chemical suppliers, material mills and factory teams — to the table. Through these collaborative efforts, we completed our transition to PFAS-free DWR finishes.

The final phase of our work to eliminate PFAS from our supply chain is phasing out polytetrafluoroethylene (PTFE) membranes, commonly found in waterproof apparel and footwear. PTFE membranes use PFAS chemicals in their production and may release PFAS at end of life under extreme conditions. We plan to complete the phase out of PTFE membranes by the end of the 2024 calendar year.

Nike is proud of its work to reduce PFAS use in our industry. The project has validated the need to have a prospective view of sustainable chemistry, looking for opportunities to improve before regulatory

mandates take effect. Because of early work to remove PFAS from our supply chain, we are well positioned to comply with upcoming regulations further limiting their use.

Our work to eliminate PFAS in our industry has shifted to supporting other brands. We share our list of PFAS-free DWR finishes that meet Nike's toxicology standards, and we also regularly share lessons learned from our PFAS phaseout with industry groups.



**Our ultimate aim is to create a process that leads to a reduction in the use of hazardous chemicals throughout the industry.**



# CHEMISTRY AT NIKE

## A NEW APPROACH TO ODOR MANAGEMENT

At Nike, serving the athlete\* and creating the future of sport drive us to innovate — to find effective solutions for demanding challenges by applying creativity and technical knowledge in ways that advance the performance of materials and products. Importantly, we are incrementally embedding sustainability into our approach to innovation.

Innovation teams at Nike looked at odor management from a new perspective, focusing on odor molecules rather than the microbes that produce them. This shift in thinking enabled the teams to deliver a finish to reduce odors without having to use antimicrobial technologies.

Nike product teams have also taken a close look at where we use odor management chemistry and evaluated if it's necessary. In the cases we have eliminated the treatment, we are still providing the product performance athletes need by removing these chemicals.

This approach will help keep more chemistries out of the supply chain and wastewater, and will help reduce impacts across the product life cycle.

\* If you have a body, you are an athlete.





# CHEMISTRY AT NIKE

## FINDING ALTERNATIVES TO NEOPRENE

Neoprene is a synthetic rubber material that Nike has used historically in some footwear models. Neoprene production is highly carbon intensive, and there are chemical hazards associated with some of its ingredients.

Nike continually explores alternative, more sustainable synthetic rubbers. Over the last few years, we have seen impressive advances in the performance of alternative synthetic rubbers that can replace neoprene.

In 2022, we began scaling the use of neoprene alternatives, and we're moving quickly. Our use of neoprene has dropped significantly, and we expect this trend to continue.

Innovations in sustainable materials are advancing at a rapid pace. Our work with neoprene shows the value of constantly evaluating new material options — even tried and true materials may have better alternatives.







# GAMEPLAN

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## GAMEPLAN

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## INTRODUCTION TO THE GAMEPLAN

### OVERVIEW

We expect our supply chain to use industry best practices to proactively manage chemicals, manufacturing high-performance products in a safe manner while helping to minimize impacts on the environment.

Our expectations are set out in the Nike Code of Conduct (COC) and Code Leadership Standards (CLS).<sup>1</sup> Nike's CLS communicates how suppliers should implement the COC and how we measure compliance efforts.

We will not achieve our vision without systemic changes to chemicals management within our supply chain.

Nike updated the CLS in 2021, which simplified and clarified our expectations for suppliers by aligning language and practices across all standards.

### OUR TARGETS

To reinforce Nike's COC and support adoption of cleaner chemistry, we have set a number of targets:

- Facilities meet our foundational expectations.
- Adopt cleaner chemistry alternatives for the 10 priority chemistries across our supply chain.
- Greater visibility into and better knowledge about the chemical inventories of our strategic footwear and materials suppliers.
- Compliance with the Nike RSL.
- Compliance with the ZDHC MRS.

<sup>1</sup> Section 9 of [Nike Code Leadership Standards](#) outlines the foundational requirements for all suppliers on chemicals management.





# INTRODUCTION TO THE GAMEPLAN

## EXPECTATIONS

### 1 COMPLIANCE WITH THE NIKE CODE OF CONDUCT AND CODE LEADERSHIP STANDARDS

Our COC requires all suppliers working with Nike to properly and transparently manage chemicals. Nike currently uses the Higg Facility Environment Module (Higg FEM), Social & Labor Convergence Program (SLCP), and ZDHC Wastewater guidelines to help assess facilities on chemical compliance and other CLS impact areas.

### 2 COMPLIANCE WITH THE NIKE RSL & ZDHC MRSL

Suppliers are contractually obligated to provide Nike with materials and products that meet Nike RSL requirements. All materials used to make our products must meet Nike's RSL requirements. Suppliers that under-perform against the Nike RSL will see an impact to their Manufacturing Index (MI) rating, a factory rating system devised to help Nike more effectively select and evaluate its manufacturing partners. The MI rating will help determine whether to still buy materials from them.

Managing restricted substances includes providing directions regarding the chemical formulations that enter facilities. To this end, Nike adopted the ZDHC MRSL and is committed to using ZDHC MRSL-compliant chemical formulations throughout our supply chain. Suppliers must demonstrate that chemical formulations in their inventories comply with the ZDHC MRSL.

Connect with Nike on the [ZDHC Gateway](#). There you can access all ZDHC programs, guidelines, training and tools, and register your facility.

## ACCELERATING THE PACE OF CHANGE USING A COLLABORATIVE APPROACH TO CHEMICALS MANAGEMENT

Nike believes an industry approach will continue to be a critical lever to drive a positive impact for people and the planet. We will continue to deepen our relationships with organizations that enable supplier ownership and scale industry change. Nike currently uses the Higg Facility Environment Module (Higg FEM) to help assess and verify information from suppliers and in-scope materials suppliers for foundational environmental performance practices. As the Higg FEM evolves over the coming years we intend to scale even further.

We encourage all suppliers — even those with facilities not currently in scope — to engage in the Higg FEM and utilize the assessment outcome to catalyze improvement in environmental operations and environmental sustainability strategy.

For more information about these standards, refer to the ZDHC MRSL (<https://mrsl-30.roadmaptozero.com>) and to the Nike RSL in this Playbook.



# INTRODUCTION TO THE GAMEPLAN

## 3 CHEMICAL ASSESSMENTS

Every chemistry decision comes with an opportunity to innovate. Nike uses our chemical assessment process to accelerate innovation and reduce risks for human health and the environment by working with project teams and engaging with chemistry, health, safety, and environmental experts at early phases in a project's life cycle.

Introducing new materials, new manufacturing processes or new chemistries requires a Nike chemical assessment. The assessment compares and ranks the proposed chemistries to benchmark chemistries currently in use. If a chemical is flagged for concern during the process, the Nike Chemistry Center of Excellence (COE) works with Nike teams and chemical manufacturers to find cleaner chemistry alternatives.

This assessment also applies to materials when the processing chemistry changes. For example, if a new material uses RSL-compliant yarns and existing knitting machines, but has a different construction, no chemical assessment is needed. However, if a supplier uses a new catalyst for polyester, the material must go through the chemical assessment process.

Performing chemical assessments early in the innovation cycle enables us to collaborate with our supply chain and internal teams to find cleaner chemistries that support our sustainability goals.

Suppliers, Nike teams and Nike affiliates can request a chemical assessment, which is performed in one of two ways:

- **DISCLOSURE TO NIKE (PREFERRED)**

Under the protection of a non-disclosure agreement (NDA), suppliers can provide all CAS numbers and concentrations of chemicals in their products and materials to the Nike Chemistry COE so they may perform the chemical assessment.

Once the Nike Chemistry COE receives the required information, the team meets with the supplier to review results and discuss any red flags as well as next steps.

- **DISCLOSURE TO AN INDEPENDENT CONSULTANT**

The supplier may choose to work directly with a Nike-approved third-party toxicology consultant. With this approach, Nike receives a redacted report indicating any areas of concern and works directly with the supplier to address any identified issues.



We see challenges as opportunities to innovate, create and move towards a better future.

## CONTACT

For more information on the chemical assessment process or to request a chemical assessment, reach out to the Nike Chemistry COE: [ChemCOE@nike.com](mailto:ChemCOE@nike.com).



## GAMEPLAN

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## MANAGING THE USE OF CHEMICAL PRODUCTS

### OVERVIEW

At Nike, our COC states that chemicals must be managed properly. Using compliant chemistries is the start of a journey toward creating RSL-compliant materials and finished goods — thereby helping protect people and reducing chemical impacts across the supply chain. From initial procurement to delivery of finished goods, chemistry must be managed properly at every step.

Chemicals management is the process we use to achieve our vision — from product conception to production, from proactive human health protection to ethical environmental stewardship.

Strong policies and procedures to guide inventory management and the proper handling, storage, use and disposal of chemicals are important aspects of achieving more sustainable and efficient manufacturing.

### APPROACH

Effective chemicals management is important for both finished goods factories and material suppliers. All suppliers must have capabilities in place to effectively integrate the guiding principles of chemicals management into their businesses.

Nike has transitioned away from our proprietary performance management tool, the Nike Compliance Assessment Tool (NCAT), to the Higg FEM. Over time, we will adopt additional shared, industry-wide tools to ease the administrative burden on our supply chain.

Nike uses information derived from these assessment tools to direct resources and prioritize support to elevate the supply chain.



# MANAGING THE USE OF CHEMICAL PRODUCTS

## OUR TARGET

Establishing a strong foundation of chemicals management capability across our supply chain is a key priority. Over time, updates to our COC and CLS have simplified our expectations for suppliers to align with best practices within and outside of our industry.

## EXPECTATIONS

### CHEMICALS MANAGEMENT

Nike expects all supplier facilities — both finished goods factories and materials suppliers — to employ a successful chemicals management program and

to use appropriate and relevant assessment tools to demonstrate capabilities and guide efforts to elevate performance. See the sidebar below for descriptions of some of these industry tools. See the next page for the elements of a successful chemicals management program along with guidance for chemicals inventory management. Go to the end of this section for training opportunities.

### TRANSPARENCY & TRACEABILITY

Nike's vision for traceability is to have full visibility into the journey of every product from field to athlete\* and back again. Traceability is critical to drive authenticity, sustainability, and transparency.

Suppliers must have robust record-keeping and chain-of-custody documentation to allow us to meet reporting requests from consumers, regulators, and marketplace partners.

Because Nike prioritizes transparency, suppliers' chemical inventories must be available for review to help ensure chemicals sourced comply with MRSL and RSL standards. Suppliers must fully understand the chemical make-up of their materials and product to move towards less hazardous chemistries.

## USING THE HIGG FEM

As a founding member of the Sustainable Apparel Coalition (SAC), Nike was actively engaged in creating the Higg FEM. As revisions are released, Nike continues to advocate for greater industry-wide adoption.

Similar to other components of the Higg Index, the FEM is a self-assessment tool that measures and guides sustainability performance in a structured way, with a focus on chemicals management, energy, water and waste.

## ZDHC SUPPLIER TO ZERO PROGRAM

We also encourage suppliers to take advantage of the ZDHC Supplier to Zero (StZ) program to strengthen chemical management capabilities. To engage in the ZDHC StZ program, please follow these steps using the embedded links:

- Register your facility on the [ZDHC Gateway](#) (free)
- Once registered, [send a connection Request](#) to Nike from the ZDHC Gateway.
- Use the ZDHC Gateway login credentials to [access the StZ program](#).

If you need assistance from Nike to make a connection or to request a ZDHC token for the foundational level StZ program, please contact [ChemManagement@nike.com](mailto:ChemManagement@nike.com).

## SOCIAL & LABOR CONVERGENCE PROGRAM

Nike adopted the Social & Labor Convergence Program (SLCP) assessment process to observe compliance with foundational expectations.

Like the Higg-FEM, SLCP is a self-assessment tool that enables a third-party verifier to confirm onsite conditions at a facility. The SLCP assessment includes a section dedicated to chemical management practices that are mapped to Nike CLS requirements.

\* If you have a body, you are an athlete.



# MANAGING THE USE OF CHEMICAL PRODUCTS

## ELEMENTS OF A SUCCESSFUL CHEMICALS MANAGEMENT PROGRAM

Suppliers must follow best practices, adhering to local law and permits, to successfully mitigate the risks associated with chemical use.

- Source chemicals that comply with Nike's MRSL and RSL requirements.
- Communicate chemical hazards by understanding how to use safety data sheets (SDSs) and label chemicals accurately.
- Effectively and safely manage chemical inventory.
- Understand how chemicals are used and when personal protective equipment (PPE) may be required.
- Store chemicals appropriately using industry best practices for location and containers.
- Dispose of chemicals in a way that is proactive, safe and responsible.
- Handle and transport chemicals appropriately.
- Assess spill response and requirements to mitigate exposure.
- Take the necessary measures to identify and prevent risk.

Facility leadership must ensure that all relevant stakeholders understand these basic principles and are aware of the risks associated with improper chemical management. Nike believes that continuous improvement is essential to a successful chemicals management program and that "there is no finish line."

## INVENTORY MANAGEMENT

Effective inventory management optimizes suppliers' investments and supports efforts to protect people, produce compliant and safe finished goods and guide correct disposal of chemicals.

Once a chemical enters a facility, a typical inventory contains comprehensive information, including:

- Commercial name of all chemicals on-site going back 24 months.
- Name of each chemical and its manufacturer.
- Chemical volume/mass.
- Location in the facility.
- Expiration date.
- Hazard information.
- Disposal record.
- Up-to-date and compliant SDSs.

- ZDHC MRSL compliance status (including conformity level).
- References to recipes and formulas that use the chemical to support traceability.
- Additional traceability requirements as specified by Nike.

It is critical to establish and maintain a chemical inventory with strong oversight to help ensure all information is current, complete, and accurate. Appropriate chemical inventory management software is an effective way of managing information.

A robust chemical inventory also helps suppliers track and manage volumes of chemical products consumed or disposed of. With this information, a facility can calculate efficiencies and use a mass balance approach to assess across the whole facility, or even across individual process steps. Year-on-year review of chemical masses per kilogram of material or product should also be calculated to help clarify where more stringent controls can help reduce cost, hazard exposure, waste and the amount of expiring chemicals.





# MANAGING THE USE OF CHEMICAL PRODUCTS

## STORAGE & HANDLING

Chemical inventories and SDSs contain important guidance for storing and handling chemicals.

Specifically, the physicochemical properties and toxicological hazards outlined in the SDS are critical for making informed decisions that protect people and planet. For example, given the variety of chemicals a facility typically sources, it is unlikely that one type of PPE and/or other worker-protection is sufficient to safeguard against all chemicals. Care must be taken to understand the appropriate PPE requirements and/or other workplace-related health and safety requirements of each chemical.

Furthermore, decisions about safe chemical storage are predicated on an understanding of chemical properties and chemical compatibility. Though suppliers should always have a dry, well-ventilated storage space, chemical compatibility cannot be overlooked.

Nike provides detailed guidance on this topic in the Chemicals Management training course. See Training Opportunities at the end of this section for more information.

## HAZARD COMMUNICATION

Early communication about chemistry helps to increase worker confidence, minimize risks of improper use or exposure and encourage a culture

of workplace safety. Effective communication across a facility — from chemical procurement to chemical disposal — also facilitates compliance and increases efficient chemical decisions.

Chemical information must be clearly communicated to employees in accordance with the applicable legal and regulatory requirements, and at a minimum:

- All chemical containers must be labeled with formulation, manufacturer and date.
- Hazardous chemicals must be labeled with signal word, hazard and precautionary statements, and appropriate pictograms.
- All employees have access to current, compliant SDSs for all chemicals.
- All employees receive training on chemicals and their associated risks.

SDSs are critically important, providing guidance on specific chemistries that might require specialized engineering controls, PPE, storage or environmental treatment systems.

All employees are expected to be familiar with and understand the chemicals management program, which provides the legal framework and essential behaviors to help them make the right decisions. All employees should be required to formally acknowledge and confirm that they have read, understood, and agreed to comply with the chemicals management program.

## INDUSTRIAL HYGIENE & WORKER PROTECTION

One critical component of an effective chemicals management program is to protect the health and safety of people in the workplace. Certain materials can produce irritating effects if not properly controlled.

To protect workers from chemical hazards, Nike developed a CLS and the Nike Industrial Hygiene Playbook, which outlines the principles and practices of an effective Industrial Hygiene (IH) program. Suppliers are required to follow best practices to address occupational health and hygiene hazards in the workplace.

Where local requirements do not exist, suppliers must comply with the most restrictive recognized regulation or consensus standards, for example:

- Threshold limit values (TLVs) from the American Conference of Governmental Industrial Hygienists (ACGIH).
- Permissible exposure limits (PELs) from the U.S. Occupational Safety and Health Administration (OSHA).
- Recommended exposure limits (RELs) from the National Institute of Occupational Safety and Health (NIOSH).



# MANAGING THE USE OF CHEMICAL PRODUCTS

Standards selected must provide the greatest level of protection to employees in the work environment. Suppliers are responsible for implementing Occupational exposure limits (OELs) for their respective facilities that meet local law or Nike CLS requirements, whichever is more conservative.

The purpose of an Industrial Hygiene program is to help ensure employee exposures to hazards are evaluated, and exposures are mitigated, through the application of appropriate controls — such as elimination, substitution, engineering (e.g., ventilation, isolation), administrative (e.g., work practices) or PPE. See Figure 1, Hierarchy of Controls.

The fundamentals of Industrial Hygiene are to Anticipate, Recognize, Evaluate and Control (AREC) chemical, physical and biological hazards that may arise in the workplace.

## ANTICIPATE

Anticipation involves identifying potential hazards before they are introduced into manufacturing processes or the workplace and assessing related risks for employees. Generally, this means knowing that hazards may exist within processes and using basic knowledge of chemistry, biology and physics to anticipate which types of hazards are likely to generate risks. Hazards are primarily expected to occur due to materials (e.g., chemistries, raw materials) or machines — or a combination of the two.

## RECOGNIZE

Recognizing involves identifying the potential hazard that chemical, physical or biological agents or an adverse ergonomic situation pose to health. This means evaluating Industrial Hygiene risks and determining if a hazard is likely to exist.

## EVALUATE

Evaluating hazards essentially means measuring or estimating actual exposures and comparing to an acceptable exposure level such as an OEL. Exposures that exceed this limit will require controls be implemented to prevent such exposure.

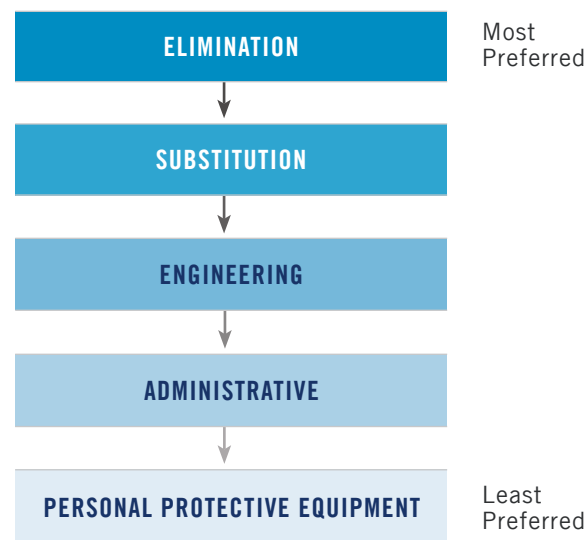
## CONTROL

Controls are the measures employed to mitigate unacceptable exposures. Health hazard controls include elimination of the hazard, material substitution, engineering controls, work-practice controls, administrative controls, and PPE.

Figure 1.

## HIERARCHY OF CONTROLS

Moving down the hierarchy, the effectiveness and reliability of health hazard controls decrease.



## INDUSTRIAL HYGIENE PROGRAM MANAGEMENT

See the Nike Industrial Hygiene Playbook to review the framework of a sustainable Industrial Hygiene program.

<https://chemistry.nike.com/resources>





## USE & EFFICIENCY

Using RSL- and MRSL-compliant formulations in a manufacturing environment is the first step in meeting critical environmental protection and RSL compliance goals. The proper, efficient use of all chemicals will maximize value and minimize impacts. World-class procurement practices and maximizing chemical efficiencies in production amplify one another to accelerate efforts in reducing the amount of hazardous chemistries consumed and potentially discharged.

### PROCESS CONTROLS TO INCREASE EFFICIENCY

Efficient chemical use is a broader concept than simply balancing chemical reactions. Implementing process controls that enable a “right first time” (RFT) approach can reduce reworking and/or demand for extra chemistry — which has a huge impact on efficiency. The RFT approach can increase overall efficiency and reduce water use, energy use and labor costs.

Beyond substitution, an effective means for immediate reduction in chemical impacts is to optimize process efficiency by eliminating overuse. While this is simple in concept, it is not always simple in practice and requires both in-depth process knowledge and chemistry expertise.

Nike strongly encourages suppliers to investigate each unit process and perform mass balance calculations to confirm that only the appropriate amounts of chemical formulations are used to achieve the intended function.

A comprehensive approach must be used to include all inputs, uses and outputs from a facility.

# MANAGING THE USE OF CHEMICAL PRODUCTS

## USING BETTER SOLVENTS IN FINISHED-GOODS FACTORIES

Nike's work to address the use of petroleum-based solvents within manufacturing has a decades-long history: Between 1995 and 2014, Nike reduced solvent use by 96% per pair of shoes through the adoption of water-based adhesives. (See Figure 2.) While our progress in footwear manufacturing has been significant, we know there is still opportunity for improvement.

As part of Nike's 2025 Cleaner Chemistry targets, we have looked for opportunities to meet our 10% solvent reduction target for inks and paints by reviewing models, production numbers and solvent fractions in key areas — including in inks and paints applied to footwear.

We have worked with other brands to achieve alignment on the industry-wide management and restrictions of certain solvents listed in the Nike RSL and ZDHC MRSL. Today, our industry lacks a common quantitative approach to monitor and calculate solvent reduction, so we are building tools to collect this data in our own supply chain. Upon launch, we can leverage these tools in other areas.

### SUPPLIER GUIDANCE FOR CLEANER SOLVENTS

Nike suppliers must limit excess solvent usage in all application and pursue water-based alternatives and other solvents that are considered cleaner alternatives.

- **WATER-BASED SOLVENTS.** Whenever possible and feasible, Nike prioritizes water-based over petroleum-based solvents due to their safer

chemical hazard profile. Water-based solvents include a liquifying agent that takes the form of water and therefore have lower volatile organic compound (VOC) emissions. They are also a preferred alternative for worker health and safety.

- **OTHER PREFERRED SOLVENTS.** Not all petroleum-based solvents are equal from a hazard perspective. Using Nike's chemical assessment process, we have identified certain solvents that are preferred over those that are more hazardous. Examples of petroleum-based solvents Nike prioritizes as better alternatives are listed in Table 1.

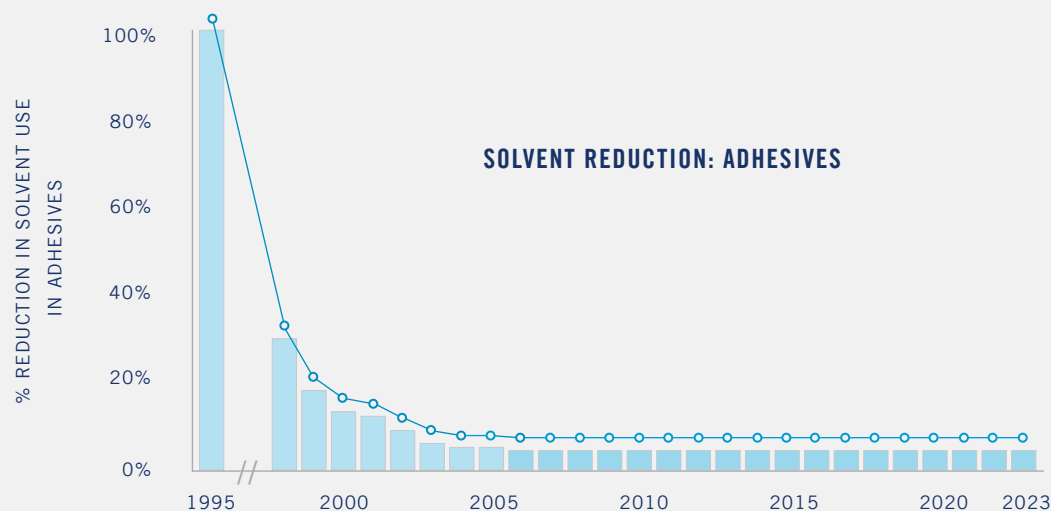


Figure 2.

### REDUCTION IN THE USE OF PETROLEUM-BASED SOLVENTS FROM 1995 – 2023 IN NIKE FOOTWEAR

By adopting water-based adhesives, Nike has reduced solvent use by 96% per pair of shoes since 1995.

Looking forward to 2025, we are actively driving a further reduction of 10% in the amount of solvents used in inks and paints applied to footwear.



Table 1.

**NIKE-PREFERRED SOLVENTS**

Disclaimer: Nike takes no responsibility for the use of these solvents in particular products or processes. Whether a solvent is appropriate for use should be assessed on a case-by-case basis for each specific jurisdiction where the facility is located. This is not an exhaustive list of all solvents that may be suitable for use in products. Additionally, the solvents listed have not been deemed to present zero harm to the workers interfacing with them. Suppliers should conduct a thorough exposure assessment to quantify the risk, based on the application. For more information on the exposure assessment process, please review the Nike Industrial Hygiene Playbook, available at <https://chemistry.nike.com/resources>.

	CAS NO.	SUBSTANCE
1	110-98-5	1,1'-Oxydipropen-2-ol
2	6920-22-5	DL-Hexane-1,2-diol
3	107-88-0	Butane-1,3-diol
4	504-63-2	Propane-1,3-diol
5	629-11-8	Hexane-1,6-diol
6	100-79-8	2,2-Dimethyl-1,3-Dioxolane-4-methanol
7	56539-66-3	3-Methoxy-3-methylbutan-1-ol
8	1117-86-8	Caprylyl glycol
9	143-28-2	(Z)-Octadec-9-enol
10	25265-71-8	Oxydipropenol
11	24800-44-0	Tripropylene glycol
12	112-60-7	Tetraethylene glycol
13	1569-01-3	1-Propoxypropan-2-ol
14	107-41-5	2-Methylpentane-2,4-diol
15	102-76-1	Glycerol triacetate

	CAS NO.	SUBSTANCE
16	110-27-0	Isopropylmyristate
17	123-95-5	Butyl stearate
18	763-69-9	Ethyl 3-ethoxypropionate
19	108-32-7	Propylene carbonate
20	1119-40-0	Dimethyl glutarate
21	627-93-0	Dimethyl adipate
22	106-65-0	Dimethyl succinate
23	97-64-3	Ethyl lactate
24	14035-94-0	Dimethyl methylglutarate
25	55934-93-5	Tripropylene glycol n-butyl ether
26	108-32-7	Propylene carbonate
27	8001-79-4	Castor oil
28	56-81-5	Glycerol
29	8042-47-5	White mineral oil, petroleum
30	9004-74-4	Polyethylene glycol monomethyl ether



# MANAGING THE USE OF CHEMICAL PRODUCTS

## TRAINING OPPORTUNITIES

The foundation of a robust chemicals management program is knowledge. Understanding the principles of chemicals management and putting them into practice requires ongoing work from factory leadership and staff. There are many resources available for training, and Nike offers a streamlined list of educational opportunities. This is not an exhaustive list of all trainings and study materials that may be suitable for building an appropriate foundation for a robust chemical management program. The right choice of training/education should be made on an individual basis and most suited to the respective Nike supplier's facility or production needs.

### NIKE WEB-BASED TRAINING

Nike provides a web-based training course that covers key elements of a chemicals management program based on industry best-practices.

This training can be accessed at the Nike Chemistry website: <https://chemistry.nike.com/resources>

### AFIRM CHEMISTRY TOOLKIT

Apparel and Footwear International RSL Management (AFIRM) Group publishes a Chemistry Toolkit to support suppliers in their journeys toward strong chemicals management and RSL testing compliance. This toolkit highlights the significance of RSL testing for the supply chain, how to implement RSL testing, failure resolution, chemicals management, SDS

interpretation, and many other online educational resources. Find the toolkit in Chinese, English, Indonesian, Japanese, Spanish, and Vietnamese at [www.afirm-group.com/toolkit](http://www.afirm-group.com/toolkit).

### ZDHC TRAINING

ZDHC released an updated Chemicals Management System Framework in 2020 and a Technical Industry Guide in 2021. Both are available for review on their website. In addition, they offer virtual and in-region training on many topics, including chemicals management. Find more information at <https://academy.roadmaptozero.com>.

### OCCUPATIONAL HEALTH AND HYGIENE

#### PHYLMAR

"Fundamentals of Industrial Hygiene," offered by Phylmar Academy, is an introductory-level course on the basics of IH. As noted in the Nike Industrial Hygiene Playbook (page 27), this course represents Level 1 training. The training can be found at: <https://phylmar.learningcart.com/products/Fundamentals-of-Industrial-Hygiene-in-dev.aspx>

#### OCCUPATIONAL HYGIENE TRAINING ASSOCIATION

The Occupational Hygiene Training Association (OHTA), a registered UK charity, promotes better standards of occupational hygiene practices globally. They have developed training materials and make them freely available for use by students and trainers.

Based on the needs of Nike's suppliers, OHTA-approved training providers organize basic courses on

occupational health and hygiene as well as advanced courses covering management, control and effects of chemicals.

The Nike Industrial Hygiene Playbook has a Skills Maturity Matrix, which provides a framework to help facilities develop capabilities to assess Industrial Hygiene hazards in the workplace. Many resources exist beyond this scope, so consultation may be required to assess experience and ensure responsibility for the health and safety of workers.

To access the Nike Industrial Hygiene Playbook and the Skills Maturity Matrix, please visit <https://chemistry.nike.com/resources>.





## GAMEPLAN

# INPUT MANAGEMENT

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### Disclaimer:

Nike does not control the content of third-party tools and accepts no responsibility for their accuracy.

## CONTROLLING CHEMICAL INPUTS

### OVERVIEW

Best practices for chemical management begin with controlling chemicals sourced and used within a manufacturing facility. By taking advantage of industry tools that guide procurement of conformant input chemistry, suppliers can confidently select chemical formulations that meet or exceed compliance requirements.

### OUR TARGET

Nike's target for chemical inputs is full compliance with the ZDHC Manufacturing Restricted Substances List (MRSL) across all suppliers using process chemicals. Any chemistry that comes in contact with materials or product must meet both the Nike RSL and ZDHC MRSL.

Nike validates supplier MRSL performance in multiple ways:

- Through ZDHC InCheck and ChemCheck reports.
- Through ongoing testing of wastewater, using limits established in the [ZDHC Wastewater Guideline](#).



**All suppliers must demonstrate a consistent, effective and legally compliant approach for chemicals management.**

**Input management helps suppliers identify and mitigate potential chemical risk to workers, the environment and consumers by facilitating procurement, proper handling, storage, use and disposal of chemicals.**



# CONTROLLING CHEMICAL INPUTS

## ZDHC MRSL

The ZDHC Manufacturing Restricted Substances List (ZDHC MRSL) is a list of chemical substances banned from intentional use in the processing and/or making of textile materials, leather, rubber, foam, adhesives and trims used in the textile, apparel, footwear, and other industries. Intentional use means the substance is used deliberately in a chemical product to achieve a desired look or functionality.

Chemical formulations covered by restrictions in the ZDHC MRSL include, but are not limited to, cleaners, adhesives, paints, inks, detergents, dyes, colorants, auxiliaries, coatings and finishing agents used during raw material production, wet processing, process machinery maintenance, wastewater treatment, sanitation, and pest control.

ZDHC MRSL limits apply to substances in commercially available formulations; these limits are not for earlier stages of chemical synthesis.

The MRSL differs from the RSL in that it applies to chemicals and formulations used in production, whereas the RSL identifies restricted chemical limits in materials and finished goods.

## EXPECTATIONS

To meet MRSL requirements, suppliers must understand the technical requirements of the ZDHC MRSL program, when the MRSL is applied and how to use the tools that support procurement of MRSL-conformant formulations.

Relevant information about the MRSL program can be found at: <https://www.roadmaptozero.com/input>

The latest version of the MRSL can be found at: <https://mrsl.roadmaptozero.com/?guidance=1>

## APPROACH

For suppliers representing the majority of our materials production, we require selection and implementation of ZDHC-approved inventory management tools. A list of ZDHC-approved Solution Providers is available on the [ZDHC Implementation Hub](#).

Suppliers can choose the ZDHC-approved Solution Provider most suited to their facility or production needs. Once suppliers select a Solution Provider and subscribe to its inventory management platform, they must update their chemical inventories on a monthly basis. This chemical inventory information is available both to suppliers and to Nike through the Solution Providers' online dashboard and ZDHC InCheck reports.



## ZDHC MRSL

The ZDHC MRSL covers chemical formulations including but not limited to cleaners, adhesives, paints, inks, detergents, dyes, colorants, auxiliaries, coatings and finishing agents used during raw material production, wet processing, process machinery maintenance, wastewater treatment, sanitation and pest control.

These limits apply to substances in commercially available formulations and are not for earlier stages of chemical synthesis.

## ZDHC TOKENS

Nike has a number of ZDHC “tokens” available for in-scope compliance facilities that wish to complete specific ZDHC programs. For example, tokens allow a facility to receive a certificate of completion for finishing a foundational level in the Supplier to Zero program at no cost. Please reach out to [ChemManagement@nike.com](mailto:ChemManagement@nike.com) to request a token if interested.







# CONTROLLING CHEMICAL INPUTS

## ZDHC RESOURCES

ZDHC Foundation resources aid in the procurement of ZDHC MRSL-conformant chemicals and formulations.

### ZDHC CHEMICAL MANAGEMENT SYSTEM FRAMEWORK

A chemical management system (CMS) is one of the cornerstones to ensuring continuous improvement towards our goal of zero discharge of hazardous chemicals. This document establishes minimum requirements for chemicals management within a facility. Download the guidance at <https://downloads.roadmapzero.com/process/ZDHC-CMS-Framework>.

### ZDHC ACADEMY WEB-BASED AND IN-PERSON TRAINING

The ZDHC Foundation offers valuable web-based and in-person chemicals management training sessions. Find more information at <https://www.implementation-hub.org/academy>.

### ZDHC SUPPLIER TO ZERO PROGRAM

This program can help suppliers understand and implement ZDHC tools. Find details at <https://www.implementation-hub.org/supplier-to-zero>.

## ZDHC GATEWAY — CHEMICAL MODULE

This database provides visibility into more than 80,000 MRSL-conformant chemical formulations registered by the global chemical industry. The registration process is linked to the MRSL Conformance Guidance, with each registered chemical assigned a specific conformity level rating. Suppliers must register with ZDHC to access the gateway. Find details on the next page.

## MRSAL CONFORMANCE GUIDANCE

This valuable resource helps suppliers understand how chemical formulations are evaluated and rated for ZDHC MRSL conformity. The rating structure, from Level 1 to Level 3, is related to the details of the assessment and confidence that the formulation will consistently meet ZDHC MRSL requirements. <https://downloads.roadmapzero.com/input/ZDHC-MRSL-Conformance-Guidance>

There are a variety of paths for signing up with ZDHC and meeting MRSL conformity requirements. To access the ZDHC Knowledge Base, which covers all areas of ZDHC, including how to engage, please visit <https://knowledge-base.roadmapzero.com/hc/en-gb>.

The preferred approach to onboard with ZDHC and connect with Nike is outlined on the next page. Also refer to Figure 3.

# CONTROLLING CHEMICAL INPUTS

## MRSL CONFORMANCE GUIDANCE

### UNDERSTAND CHEMICALS MANAGEMENT & THE MRSL PROGRAM

1. Discover how the MRSL program fits into a complete approach to chemicals management:
  - Review requirements at <https://mrsl.roadmaptozero.com> to understand the MRSL program.
  - Download and review the ZDHC Chemical Management System (CMS) Framework, which provides guidance for implementing a proper chemicals management system. <https://downloads.roadmaptozero.com/process/ZDHC-CMS-Framework>
  - Download and review the ZDHC Technical Industry Guide (TIG) to find out how to implement the CMS guidance, including the MRSL. <https://downloads.roadmaptozero.com/process/ZDHC-CMS-TIG>

### JOIN THE ZDHC GATEWAY COMMUNITY

2. Register with ZDHC's Chemical Gateway, or reach out to [ChemManagement@nike.com](mailto:ChemManagement@nike.com) to request an invitation to join. The Nike invitation will contain instructions on how to register with the ZDHC Chemical Gateway platform.

### SIGN UP WITH A ZDHC-APPROVED SOLUTION PROVIDER

Sign up with a ZDHC-approved Solution Provider and start uploading chemical inventory information on a monthly basis. This is required for all suppliers that are in-scope for Nike compliance programs. This is strongly suggested for suppliers not yet in-scope.

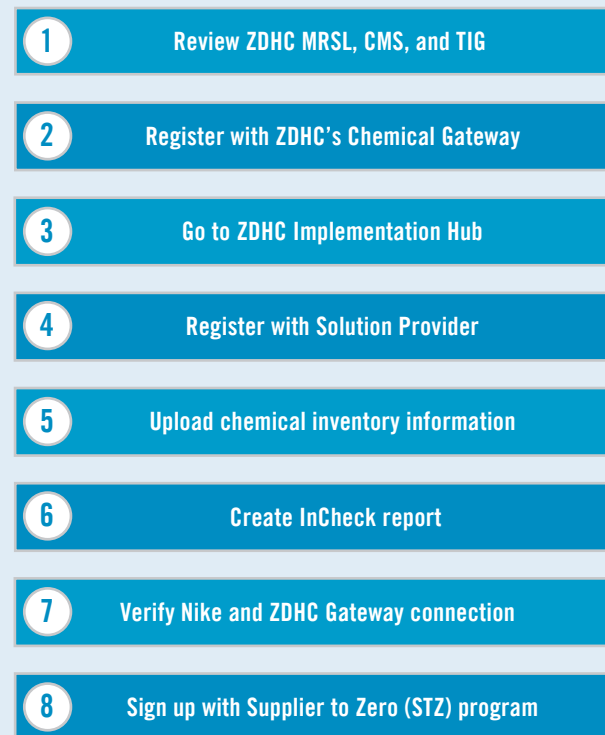
3. Go to the ZDHC Implementation Hub and select one of the ZDHC-approved Solution Providers.
4. Register and create an account with one of the selected Solution Providers.
5. Upload your facility's chemical inventory information, and continue to update it on a monthly basis.
6. Routinely engage with the Solution Provider to create a ZDHC InCheck report, review MRSL conformity findings, and create a holistic approach to improve your facility's MRSL conformity rating.
7. Verify your facility is actively connected to both Nike and the ZDHC Gateway. <https://knowledge-base.roadmaptozero.com/hc/en-gb/articles/360009958258-Managing-connections-Suppliers>

### CONTINUE YOUR JOURNEY WITH ZDHC

8. Sign up with ZDHC's Supplier to Zero (STZ) program and engage with each level of the program.

Figure 3.

### HOW TO ONBOARD WITH ZDHC TO IMPROVE MRSL CONFORMITY RATINGS



#### Why is it important to follow these steps?

- Solution Provider delivers InCheck reports to the ZDHC Gateway.
- InCheck reports (.pdf and .xls) are stored in suppliers' ZDHC Gateway accounts.
- The availability of InCheck reports is flagged on suppliers' accounts and is visible to brands.



# CONTROLLING CHEMICAL INPUTS

## ADDITIONAL TOOLS

A variety of other tools are available to help suppliers understand and procure cleaner formulations.

These other tools may be useful for specific material or production types not covered in the ZDHC MRSL; for instance, innovative chemicals outside the standard scope of our industry.

### OEKO-TEX ECO PASSPORT

ECO PASSPORT by OEKO-TEX® is an independent certification for textile and leather chemicals, dyes and auxiliaries. The three-stage verification process fulfills specific sustainability requirements for textile production and are produced in a more environmentally friendly and socially responsible manner.

ECO PASSPORT certified products are ZDHC compliant. Approximately 13,000 formulations can be found on the OEKO-TEX® Buying Guide.

The Buying Guide is a free tool that helps find chemicals, materials and factories, with links to supplier contacts. [www.oeko-tex.com/en/buying-guide](http://www.oeko-tex.com/en/buying-guide)

### BLUESIGN® BLUEFINDER

This independently managed database of certified chemical formulations is an excellent resource for textile suppliers that want to source bluesign® certified chemical formulations. Importantly, these chemicals also meet ZDHC MRSL requirements. Nike suppliers are encouraged to use this database in their procurement practices. [www.bluesign.com/en/business/finder](http://www.bluesign.com/en/business/finder)

### SCIVERALENS RAPID SCREEN

This subscription-based third-party service allows suppliers to assess formulations and obtain an early indication of whether the formulation or process aligns with cleaner chemistries such as MRSL conformance. [www.scivera.com/sciveralens](http://www.scivera.com/sciveralens)

### TOXSERVICES ToxFMD®

ToxServices Full Material Disclosure (ToxFMD®) Screened Chemistry® program helps evaluate chemical formulations and conduct product stewardship audits to eliminate chemicals of concern. ToxServices is accredited by the ZDHC to verify conformance with ZDHC MRSL Levels 1, 2, and 3 requirements. ToxFMD® Levels 1, 2, and 3 are equivalent to ZDHC MRSL Levels 1, 2, and 3. [www.toxservices.com/services/toxfmd/](http://www.toxservices.com/services/toxfmd/)



## GAMEPLAN

# OUTPUT MANAGEMENT

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## MANAGING OUTPUTS

### OVERVIEW

A manufacturing facility is not a closed system. Chemical, energy and material inputs are converted into products. Optimizing manufacturing process allows for products to be designed from the start through a lens of circularity and waste reduction. Proper management of chemical outputs from a production facility is key to a holistic chemicals management program and represents another step toward the aspirational goal of zero discharge of hazardous chemicals.

### APPROACH

Over the last several years, the apparel and footwear industry has transformed the practice of chemicals management. This work — aligning on an MRSL and RSL, and developing a chemicals management assessment framework — signals maturity within the field of chemical compliance.

Robust industry-wide collaboration is a highly effective means of improving the management of chemical outputs.

A clear example is the success of the ZDHC Wastewater Guidelines for textile and leather suppliers. This multi-brand effort sets a single, unified expectation across the textile and footwear industries for wastewater discharge quality, which goes beyond legal compliance.



# MANAGING OUTPUTS

## OUR REQUIREMENTS

Nike is committed to supply chain compliance and environmental protection through our CLS and our public targets.

Nike updated the CLS in 2021 to align with programmatic changes and provide greater clarity and alignment. For example, the new Chemicals Management section combined three previous sections into one. Requirements are laid out in the CLS for the following:

- Wastewater
- Hazardous waste
- Air emissions
- Chemicals management
- Solid waste

Key requirements for wastewater, hazardous waste, air emissions, and hazardous materials are covered below.

## WASTEWATER

Wastewater is water that is considered no longer usable for a given purpose. This includes:

- Domestic wastewater used for showers, toilets, kitchens and dormitories.
- Industrial wastewater discharged from a manufacturing process such as dyeing, finishing, laundries, washing, rinsing, etc.

The Nike CLS for wastewater stipulates that all wastewater be properly managed and treated prior to discharge.

## NIKE WATER MINIMUM PROGRAM

The Nike Water Minimum Program helps suppliers identify opportunities for greater water efficiency and to adequately prepare for closed-loop water through recycling. This applies in addition to or in the absence of legal and regulatory requirements in the jurisdiction where each facility is located.

- Sets foundational expectations for facility's commitment to water stewardship including policy, key performance indicators, water balance and maintenance.
- Establishes expectations for water and wastewater treatment system data collection to assist with troubleshooting and optimizing wastewater treatment systems to comply with the ZDHC Wastewater Guidelines.
- Encourages facilities to understand their water scarcity and flooding risks by using the World Resources Institute's Aqueduct platform, found at [www.wri.org/our-work/project/aqueduct](http://www.wri.org/our-work/project/aqueduct).
- Provides a structured approach to the operation and maintenance of water and wastewater treatment equipment.

## NIKE WASTEWATER QUALITY REQUIREMENTS

Nike CLS for wastewater requires that facilities comply with Nike's wastewater quality requirements.

At a minimum, every facility must be legally compliant with the permit issued to them by the authority having jurisdiction. This authority may vary by location; it might be the operator of an industrial park wastewater treatment system or a local, state or national government.

At no time shall untreated wastewater be released into the environment. This includes both domestic and industrial wastewater. Discharges to unlined ponds or lagoons are considered releases to the environment.

All suppliers need to meet legal compliance requirements; depending on a facility's particular situation, it might also need to comply with the ZDHC Wastewater Guidelines.

## ZDHC WASTEWATER GUIDELINES REQUIREMENTS

Facilities that are required to meet the expectations of the ZDHC Wastewater Guidelines must have a ZDHC Gateway account with an active connection to Nike. They then sample, test and report results to the ZDHC Gateway by April 30 and October 31 of each year.

Facilities that discharge treated wastewater directly to the environment are expected to demonstrate they meet at least the foundational limits for conventional, anion and metal parameters in the ZDHC Wastewater Guidelines.



# MANAGING OUTPUTS

All facilities testing per the ZDHC Wastewater Guidelines must demonstrate they are free from MRSL chemistries. In the event an MRSL chemistry is detected in the wastewater, the facility is expected to identify the root cause for the detection, address the root cause, and re-test the wastewater to demonstrate the root cause has been addressed. In the event the issue has not been resolved, the facility is expected to continue pursuing the root cause until a laboratory test result demonstrates it has been resolved.

By adopting the ZDHC Wastewater Guidelines and coupling this approach with closed-loop water, we envision a supply chain with minimal industrial wastewater discharge.

## NIKE WASTEWATER GUIDANCE DOCUMENTS

The Nike Global Water Team has guidance documents to assist with troubleshooting wastewater parameters, including but not limited to:

- Antimony
- Coliform
- Chemical oxygen demand
- Color
- Ammonia/Nitrogen

In the event a facility or enterprise requires technical support to address a specific wastewater issue, the Nike Global Water Team can provide a list of consultants with wastewater expertise.

## LINKS

Nike Global Water Team  
Subject line: Wastewater Help  
[water.program@nike.com](mailto:water.program@nike.com)

Roadmap to Zero Foundation  
<https://downloads.roadmaptozero.com/output/ZDHC-Wastewater-Guidelines>

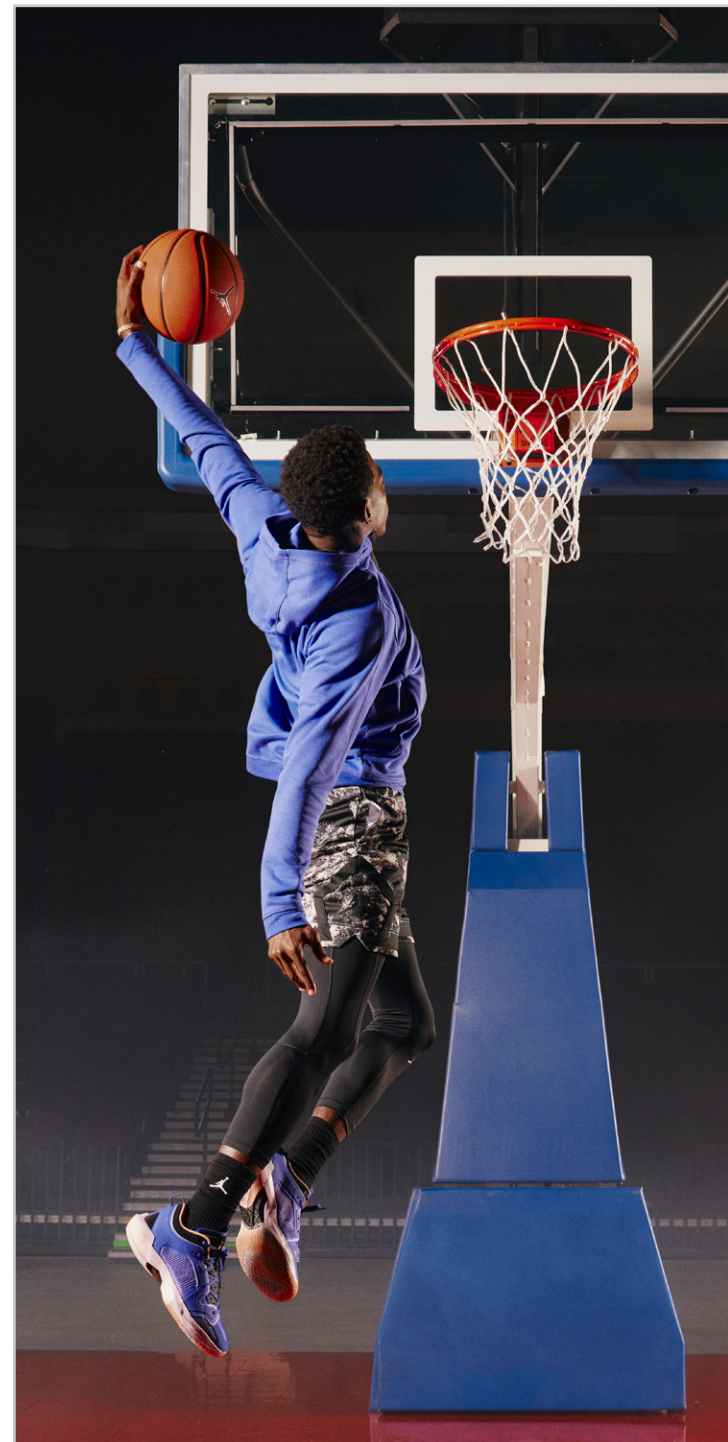
World Resources Institute  
[www.wri.org/our-work/topics/water](http://www.wri.org/our-work/topics/water)

Sustainable Apparel Coalition  
Higg Index and FEM  
[www.apparelcoalition.org/the-higg-index](http://www.apparelcoalition.org/the-higg-index)

## HAZARDOUS WASTE MANAGEMENT

Determining if waste is hazardous is the first step in dealing with these potential manufacturing outputs. In many jurisdictions, waste that contains hazardous chemistries would qualify as hazardous waste. If hazardous waste is generated on site, suppliers must safely manage it within hazardous waste collection areas, taking necessary precautions — such as ventilation, secondary containment, fire prevention and spill response.

Key personnel within the facility should receive training to understand how to identify and safely handle hazardous waste, manage its disposal in line with the applicable legal requirements using licensed waste contractors, and comply with both local and Nike waste requirements.









# MANAGING OUTPUTS

## AIR EMISSIONS

Nike creates footwear products that allow athletes to “walk on AIR.” From Nike AIR products to the air we breathe, Nike knows air is important for our athletes to perform at their peak. That’s why our COC clearly states that air emissions and climate impacts shall be minimized. Proactive characterization and routine monitoring and reporting are required for pollutants including greenhouse gases (GHGs), VOCs, hazardous air pollutants, particulates, ammonia, ozone-depleting chemicals and combustion by-products.

All facilities must comply with any local regulations, including permitting, operational requirements and monitoring. Similar to wastewater, the responsible authority may vary by location and across local, state, national and regional boundaries.

## INDUSTRY LEADERSHIP IN AIR EMISSIONS

In 2019, brands, factories, laboratories, certifying bodies and consultants formed a multifaceted task team within ZDHC to complete a global assessment of air emissions regulations and best practices. Published in January 2021, the “Air Emissions Position Paper” established requirements for air emissions estimation and monitoring across facility and process emissions. In addition, this document was the first of its kind to integrate environmental and human health impacts through Industrial Hygiene. For more information, see <https://downloads.roadmaptozero.com/output/Air-Emission-Position-Paper>.

## FACILITY EMISSIONS

Energy production and use may result in air emissions, including GHG emissions. Nike supports the global Science Based Targets initiative (SBTi), which aims to reduce GHG emissions in line with what is needed collectively to avoid the worst impacts of climate change.

Combustion by-products such as NO<sub>x</sub>, SO<sub>x</sub>, and CO can be minimized by closely tracking and monitoring equipment and fuel sources.

Therefore, in line with the [UN Fashion Industry Charter for Climate Action](#), no new coal is allowed as of January 1, 2023, with a complete phaseout by 2030.

Nike’s CLS states that suppliers shall not use heavy fuel oil and chlorofluorocarbon (CFC) and must comply with legislation that applies to industry air emissions. While hydrofluorocarbons (HFCs) and hydrochlorofluorocarbons (HCFCs) are discouraged from use, in 2030 they will be prohibited. Per Nike CLS, suppliers must maintain an accurate inventory of all Scope 1 and Scope 2 GHG emissions in accordance with GHG Protocol standards.

Find more information at <https://ghgprotocol.org>. Please reach out to your Climate & Energy contact or e-mail [Climate@nike.com](mailto:Climate@nike.com) with questions.

## NON-GHG & GHG KEY POINTS

- 1 Energy production and use may result in air emissions, including non-GHGs and GHGs.
- 2 GHGs are addressed through Nike’s climate targets, such as the SBTi.
- 3 Non-GHG impacts include NO<sub>x</sub>, SO<sub>x</sub>, CO.
- 4 The UN coal phaseout supports both air quality and GHG reduction.
- 5 In support of both non-GHG and GHG targets, Nike’s CLS states:
  - Coal will be phased out.
  - Heavy fuel oil is prohibited.
  - CFCs are prohibited.
  - HFC/HCFC are discouraged and will be phased out
- 6 GHG inventory is required.





# MANAGING OUTPUTS

## PROCESS EMISSIONS

Changes to chemicals within facility processes may impact air emissions. Therefore, it's important to calculate the potential to emit (PTE) and/or calculate expected emissions when chemicals are characterized as air pollutants. Inventory management is also essential, as location and type of chemicals can help facilities to assess if air pollution control equipment is needed.

Indoor air quality must be maintained to protect against occupational exposure. We recommend following global best practices and the Nike Industrial Hygiene Playbook.

These improvements help the industry to better understand our air emissions impact. Nike will continue to help the industry move forward by supporting the forthcoming Air Emissions Guideline. Over time, we anticipate helping the industry to embed air emissions capabilities across the global supply chain.

## HAZARDOUS MATERIALS

Finished goods factories and material production facilities are designed to efficiently manufacture products such as footwear, apparel, equipment, packaging, electronics, toys, accessories, jewelry, and more.

Output from these facilities is based on the production and utilization of materials. From a Nike standpoint, our products and the materials used to make them must comply with Nike RSL requirements. Our approach to material compliance can be found in the Rules of the Game: The Nike RSL section of this Playbook.

In addition to the material testing requirements outlined in the Nike RSL, finished goods factories must demonstrate the necessary leadership behaviors — outlined in our COC and the Restricted Substance Management CLS — to successfully comply with Nike's RSL requirements.



A person is sitting on a wooden chair, wearing Nike sneakers and socks. The sneakers are black with red and blue accents. The socks are black with a white Nike swoosh. The person is wearing a blue jacket and grey shorts. The background is a room with a window and some items hanging on the wall.

# RULES OF THE GAME: THE NIKE RSL

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## NIKE RESTRICTED SUBSTANCES LIST

### OVERVIEW

As part of our goal to protect human health and the environment, we routinely update the Nike RSL to keep suppliers informed about new global regulatory requirements as well as Nike’s voluntary restrictions on chemicals.

### NIKE RSL GOALS

- 1 Enable product compliance with the strictest global legislation.
- 2 Confirm targeted substances are limited or eliminated.
- 3 Catalyze sustainable product innovation.

### ADDITIONAL MATERIAL GUIDANCE

In addition to restrictions on chemical substances, the Nike RSL also provides guidance regarding:

- Animal skins
- Nanomaterials
- Odor management: antimicrobials and scented items
- PVC (prohibited from use)
- Recycled materials



Nike RSL Effective Date

**MAY 31, 2023**

Date All Materials, Products & Items Must  
Comply with This RSL

**SEPTEMBER 1, 2023**

# NIKE RESTRICTED SUBSTANCES LIST

## COMPLIANCE

Nike's intent is to give suppliers sufficient lead-time to understand changes and take steps to remain RSL compliant. However, there may be special circumstances — such as new or forthcoming legislation — that result in short notice. Upon publication of this document, the Nike RSL Effective Date (see page 39) and all policies and test limits listed herein are in effect.

To help suppliers transition to new requirements, the RSL team will review all test failures that occur between the effective date and the deadline to comply, which is typically 90 days from the RSL update. If a failure would have met the previous RSL limit(s), the team may grant a one-off exception. The exception will require immediate corrective action to ensure future compliance.



**Nike does not require materials that have passed RSL testing within the last 365 days be retested upon release of a revised RSL policy.**

## SUPPLIER AGREEMENTS

Nike supplier agreements reflect the need for compliance with RSL requirements. This compliance is in addition to the COC, quality standards and other health and safety standards. Nike hereby designates the following to be the “official Nike RSL website,” as may be referenced in supplier agreements: <https://chemistry.nike.com/restricted-substances-list>

## KEY POINTS

- Specific information on how and what to test is included in the “Scope” section of this document.
- RSL test results are valid for one year from the test date unless otherwise stated.
- Nike reserves the right to request (additional) testing of any material or product at any time.
- Suppliers cannot change process or chemicals once they receive an RSL PASS for a material. Any change requires retesting to confirm RSL compliance.
- Subcontractors, auxiliary persons, agents, etc. must comply with all RSL testing requirements.

## UPDATES IN THIS VERSION

All end users should read the Nike Chemistry Playbook in its entirety to make certain they take note of and understand all updates to policies, procedures and test limits.

For an overview of the most critical revisions to the Nike RSL, download “2023 Nike RSL Update Highlights” at <https://chemistry.nike.com/resources>.

## RSL & CHEMICALS MANAGEMENT TRAINING

To access training, visit the Nike Chemistry website. <https://chemistry.nike.com>

## RSL TRAINING

This mandatory training for all factories and material suppliers focuses on understanding and implementing the Nike RSL, selecting and submitting test samples, reviewing test results and the failure-resolution process.

- Suppliers must repeat RSL training every two years. As a best practice, we suggest reviewing training materials with the release of each Playbook update.
- This training is available on demand as a refresher course and to help train new people.

## CHEMICALS MANAGEMENT TRAINING

ZDHC has resources such as the Technical Industry Guide (TIG) for Chemical Management Systems (CMSs) that can provide guidance for implementing industry best practices for chemicals management. <https://downloads.roadmapzero.com/process/ZDHC-CMS-TIG>





# NIKE RESTRICTED SUBSTANCES LIST

## NIKE RSL TESTING APPLICATION TRAINING

All suppliers must use the Nike RSL Testing Application, available at <https://rsltesting.nike.com>, to create a Test Request Form (TRF) and submit RSL test reports. Training on how to use the Nike RSL Testing Application is available within the application itself. Translations are available upon request and also within the RSL Testing Application.

For assistance in gaining access to the Nike RSL Testing Application or the “How To Guide,” please contact [RSLSupport@nike.com](mailto:RSLSupport@nike.com).

## THE AFIRM GROUP RSL

Apparel and Footwear International RSL Management (AFIRM) Group is an apparel and footwear industry body focused on chemistry. Nike, one of six founding member brands, has worked with the group for more than 15 years to improve the management of hazardous and restricted substances in the global supply chain.

## INDUSTRY-WIDE APPROACH TO RSL COMPLIANCE

AFIRM released the first version of its industry-wide RSL in 2015 and publishes updates annually. Based on the collaborative effort of more than 40 brands, the AFIRM RSL provides a simplified and aligned approach to managing restricted substances across the largely shared global supply chain. We use the AFIRM RSL to inform Nike's RSL chemistry requirements.

## NIKE-SPECIFIC RESTRICTIONS & ADDITIONAL CHEMICAL LIMITS

The substances listed in the AFIRM and Nike RSLs represent chemistries identified through historical chemical testing and the expertise and know-how of the global footwear and apparel industries — all inspired by brands' ambition to help protect human health and the environment by limiting exposure to hazardous chemicals.

Nike is continually innovating new materials, which requires us to consider new chemistries — some of which are not typically used in the manufacture of apparel and footwear. A separate list of Nike-specific chemical and material restrictions follows the Nike RSL.

Because of this, it is imperative that suppliers comply with the current Nike RSL, in addition to any legally binding limits that may apply in the jurisdiction where they operate — such as applicable prohibitions and restrictions pursuant to the EU REACH, including the Substances of Very High Concern (SVHC), the California Proposition 65 List, etc.



# NIKE RESTRICTED SUBSTANCES LIST

## DEFINITION OF “COMPONENT” IN DETERMINING RSL TEST LIMITS

Please note the following when using the “Nike Limits” column in the Nike RSL.

Unless otherwise specified, the component subject to this concentration limit is:

- A material of uniform composition throughout, or
- A material consisting of a combination of materials that cannot be disjoined or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.

When several components are used to form a complex material, they should be assessed individually. Please reach out to [RSLSupport@nike.com](mailto:RSLSupport@nike.com) for specific guidance.

## AGE RANGES FOR INTERPRETING RSL TEST LIMITS

Various countries define the terms “babies,” “infants,” “toddlers,” “children” and “adults” differently. Based on legislation, the age ranges listed in Table 2 satisfy the most restrictive global requirements.

Table 2.  
SIZING BY AGE RANGE

	BABIES, INFANTS, TODDLERS	CHILDREN		ADULTS
	0 – 36 months	LITTLE KIDS 3 – 7 years	BIG KIDS 7 – 14 years	14 years +
<b>APPAREL SIZE UNITED STATES</b>	0 – 4T	4 – 7 boys 4 – 6x girls	8 – 20 boys 7 – 14 girls	
<b>APPAREL SIZE EUROPE</b>	68 – 98 cm	104 – 128 cm	128 – 182 cm boys 128 – 176 cm girls	
<b>APPAREL SIZE ASIA</b>	< 85 cm	85 – 120 cm	120 – 170 cm	
<b>FOOTWEAR</b>	< 17 cm	17.5 – 22 cm	22.5 – 25 cm	
<b>EQUIPMENT</b>	Pee Wee	Junior	Youth	












## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
ACETOPHENONE & 2-PHENYL-2-PROPANOL 					
98-86-2	Acetophenone	50 ppm = Pass >50–1,000 ppm = Warning range; follow up required  >1000 ppm = Do not ship	25 ppm each	Potential breakdown products in EVA foam when using certain cross-linking agents, including Dicumyl Peroxide.	Extraction in acetone or methanol GC/MS, sonication for 30 minutes at 60°C
617-94-7	2-Phenyl-2-Propanol				
ACIDIC & ALKALINE SUBSTANCES: pH					
Various	pH-value	Textiles: 4.0 – 7.5  Leather: Chrome-tanned: 3.2 – 4.5  Other: 3.5 – 7.0	Not applicable	The pH-value is a characteristic number, ranging from pH 0 to pH 14, indirectly showing the content of acidic or alkaline substances in a product.  pH-values below 7 indicate sources of acidic substances and values above 7 indicate sources of alkaline substances.  To avoid irritation or chemical burns to skin the pH-value of products shall be in the range of human skin with about pH 5.5.  Limits cited comply with global regulations for all products. These limits also minimize the chance of Chromium VI formation during the tanning and processing of leather.  Important: Egypt, Morocco, and the Gulf Cooperation Council (GCC) require pH for leather not lower than 3.5.	Textiles and synthetic coated fabrics: EN ISO 3071:2020  Leather: EN ISO 4045:2018






## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
ALKYLPHENOLS (APs)  & ALKYLPHENOL ETHOXYLATES (APEOs)  INCLUDING ALL ISOMERS					
Various	Nonylphenol (NP), mixed isomers	Total APs: 10 ppm  Total APs + APEOs: 100 ppm	Total NP + OP: 3 ppm	APEOs can be used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifying/dispersing agents for dyes and prints, impregnating agents, de-gumming for silk production, dyes and pigment preparations, polyester padding and down/feather fillings.  APs may be used as intermediaries in the manufacture of APEOs and antioxidants used to protect or stabilize polymers. Biodegradation of APEOs into APs is the main source of APs in the environment.	Textiles and leather: EN ISO 21084:2019  Down garments: GB/T 14272:2021  Polymers and all other materials: 1 g sample / 20 mL THF, sonication for 60 minutes at 70°C, analysis according to EN ISO 21084:2019
Various	Octylphenol (OP), mixed isomers				
Various	Nonylphenol Ethoxylates (NPEOs)		Total NPEOs + OPEOs: 20 ppm	APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes. We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 ppm and that more time is necessary for the supply chain to phase them out completely.	All materials except down garments and leather: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS  Down garments: GB/T 14272:2021  Leather: Sample preparation and analysis using EN ISO 18218-1:2015 with quantification according to EN ISO 18254-1:2016
Various	Octylphenol Ethoxylates (OPEOs)				



## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
AZO-AMINES & ARYLAMINE SALTS 					
92-67-1	4-Aminobiphenyl	20 ppm each	5 ppm each	<p>Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted.</p> <p>Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles.</p>	<p>All materials except leather: EN ISO 14362-1:2017</p> <p>Leather: EN ISO 17234-1:2020</p> <p>p-Aminoazobenzene: All materials except leather: EN ISO 14362-3:2017</p> <p>Leather: EN ISO 17234-2:2011</p>
92-87-5	Benzidine				
95-69-2	4-Chlor-o-toluidine				
91-59-8	2-Naphthylamine				
97-56-3	o-Aminoazotoluene				
99-55-8	2-Amino-4-nitrotoluene				
106-47-8	p-Chloraniline				
615-05-4	2,4-Diaminoanisole				
101-77-9	4,4'-Diaminodiphenylmethane				
91-94-1	3,3'-Dichlorobenzidine				
119-90-4	3,3'-Dimethoxybenzidine				
119-93-7	3,3'-Dimethylbenzidine				
838-88-0	3,3'-Dimethyl-4,4'-diaminodiphenylmethane				
120-71-8	p-Cresidine				
101-14-4	4,4'-Methylen-bis(2-chloraniline)				
101-80-4	4,4'-Oxydianiline				
139-65-1	4,4'-Thiodianiline				






## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
AZO-AMINES & ARYLAMINE SALTS					
95-53-4	o-Toluidine	20 ppm each	5 ppm each	<p>Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleavable amines are restricted.</p> <p>Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles.</p>	<p>All materials except leather: EN ISO 14362-1:2017</p> <p>Leather: EN ISO 17234-1:2020</p> <p>p-Aminoazobenzene: All materials except leather: EN ISO 14362-3:2017</p> <p>Leather: EN ISO 17234-2:2011</p>
95-80-7	2,4-Toluyldiamine				
137-17-7	2,4,5-Trimethylaniline				
95-68-1	2,4-Xylidine				
87-62-7	2,6-Xylidine				
90-04-0	2-Methoxyaniline (= o-Anisidine)				
60-09-3	p-Aminoazobenzene				
3165-93-3	4-Chloro-o-toluidinium chloride				
553-00-4	2-Naphthylammoniumacetate				
39156-41-7	4-Methoxy-m-phenylene diammonium sulphate				
21436-97-5	2,4,5-Trimethylaniline hydrochloride				




## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
BISPHENOLS 					
80-05-7	Bisphenol-A (BPA)	Food and mouth contact items: 1 ppm  All other items: > 1 ppm = warning	Individual samples: 0.1 ppm  Composite samples: 1 ppm	Prohibited from use in food and drink containers, and items intended to come into contact with the mouth.	All materials:  Extraction: 1 g sample / 20 ml THF, sonication for 60 minutes at 60°C, analysis with LC/MS
80-09-1	Bisphenol-S (BPS)	For informational purposes only.	1 ppm each	Bisphenols may be used in the production of epoxy resins, polycarbonate plastics, flame retardants, PVC, polyamide dye-fixing agents, and sulfone- and phenol- based leather tanning agents.	
77-40-7	Bisphenol-B (BPB)			Bisphenols may be found in recycled polymeric and paper materials due to polycarbonate plastic and thermal receipt paper made with bisphenols entering waste streams.	
620-92-8	Bisphenol-F (BPF)			BPS was added to the REACH SVHC list and may need to be notified to ECHA in leather goods if found above 0.1%.	
1478-61-1	Bisphenol-AF (BPAF)				






## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
CHLORINATED BENZENES & TOLUENES (CHLORORGANIC CARRIERS) 					
95-49-8	2-Chlorotoluene	Total: 1 ppm	0.2 ppm each	<p>Chlorobenzenes and Chlorotoluenes (Chlorinated Aromatic Hydrocarbons) can be used as carriers in the dyeing process of polyester or wool / polyester fibers. They can also be used as solvents.</p> <p>Cross-contamination from anti-moth agents and poly shipping bags may cause failures.</p> <p>Important: The Gulf Cooperation Council (GCC) maintains a limit of 1 ppm for 1,2-Dichlorobenzene in textiles.</p>	All materials: EN 17137:2018
108-41-8	3-Chlorotoluene				
106-43-4	4-Chlorotoluene				
32768-54-0	2,3-Dichlorotoluene				
95-73-8	2,4-Dichlorotoluene				
19398-61-9	2,5-Dichlorotoluene				
118-69-4	2,6-Dichlorotoluene				
95-75-0	3,4-Dichlorotoluene				
2077-46-5	2,3,6-Trichlorotoluene				
6639-30-1	2,4,5-Trichlorotoluene				
76057-12-0	2,3,4,5-Tetrachlorotoluene				
875-40-1	2,3,4,6-Tetrachlorotoluene				
1006-31-1	2,3,5,6-Tetrachlorotoluene				
877-11-2	Pentachlorotoluene				
541-73-1	1,3-Dichlorobenzene				
106-46-7	1,4-Dichlorobenzene				
87-61-6	1,2,3-Trichlorobenzene				





## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
CHLORINATED BENZENES & TOLUENES (CHLORORGANIC CARRIERS)					
120-82-1	1,2,4-Trichlorobenzene	Total: 1 ppm	0.2 ppm each	<p>Chlorobenzenes and Chlorotoluenes (Chlorinated Aromatic Hydrocarbons) can be used as carriers in the dyeing process of polyester or wool / polyester fibers. They can also be used as solvents.</p> <p>Cross-contamination from anti-moth agents and poly shipping bags may cause failures.</p> <p>Important: The Gulf Cooperation Council (GCC) maintains a limit of 1 ppm for 1,2-Dichlorobenzene in textiles.</p>	All materials: EN 17137:2018
108-70-3	1,3,5-Trichlorobenzene				
634-66-2	1,2,3,4-Tetrachlorobenzene				
634-90-2	1,2,3,5-Tetrachlorobenzene				
95-94-3	1,2,4,5-Tetrachlorobenzene				
608-93-5	Pentachlorobenzene				
118-74-1	Hexachlorobenzene				
5216-25-1	p-Chlorobenzotrichloride				
98-07-7	Benzotrichloride				
100-44-7	Benzyl chloride				
95-50-1	1,2-Dichlorobenzene	10 ppm	1 ppm		
CHLORINATED PARAFFINS 					
85535-84-8	Short-chain Chlorinated Paraffins (SCCPs) (C10-C13)	1000 ppm	100 ppm	May be used as softeners, flame retardants or fat-liquoring agents in leather production. Also used as a plasticizer in polymer production.	Leather: SCCP: ISO 18219-1:2021 MCCP: ISO 18219-2:2021
85535-85-9	Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17)	1000 ppm	100 ppm		Textiles and all other materials: ISO 22818:2021 (SCCP + MCCP)






## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
CHLOROPHENOLS 					
15950-66-0	2,3,4-Trichlorophenol (TriCP)	0.5 ppm each	0.5 ppm each	Chlorophenols are polychlorinated compounds used as preservatives or pesticides.  Pentachlorophenol (PCP), tetrachlorophenol (TeCP), and trichlorophenols (TriCP) are sometimes used to prevent mold and kill insects when growing cotton and when storing / transporting fabrics.  PCP, TeCP and TriCP can also be used as in-can preservatives in print pastes and other chemical mixtures.	All materials: DIN 50009:2021
933-78-8	2,3,5-Trichlorophenol (TriCP)				
933-75-5	2,3,6-Trichlorophenol (TriCP)				
95-95-4	2,4,5-Trichlorophenol (TriCP)				
88-06-2	2,4,6-Trichlorophenol (TriCP)				
609-19-8	3,4,5-Trichlorophenol (TriCP)				
4901-51-3	2,3,4,5-Tetrachlorophenol (TeCP)				
58-90-2	2,3,4,6-Tetrachlorophenol (TeCP)				
935-95-5	2,3,5,6-Tetrachlorophenol (TeCP)				
87-86-5	Pentachlorophenol (PCP) and its salts and esters				
DIMETHYLFUMARATE 					
624-49-7	Dimethylfumarate (DMFu)	0.1 ppm	0.05 ppm	DMFu is an anti-mold agent used in sachets in packaging to prevent the buildup of mold, especially during shipping.	All materials: ISO 16186:2021




## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
DYES: DISPERSE 					
2475-45-8	C.I. Disperse Blue 1	30 ppm each	15 ppm each	<p>Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g., polyester, acetate, polyamide).</p> <p>Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.</p>	All materials: DIN 54231:2022
2475-46-9	C.I. Disperse Blue 3				
3179-90-6	C.I. Disperse Blue 7				
3860-63-7	C.I. Disperse Blue 26				
56524-77-7	C.I. Disperse Blue 35A				
56524-76-6	C.I. Disperse Blue 35B				
12222-97-8	C.I. Disperse Blue 102				
12223-01-7	C.I. Disperse Blue 106				
61951-51-7	C.I. Disperse Blue 124				
23355-64-8	C.I. Disperse Brown 1				
2581-69-3	C.I. Disperse Orange 1				
730-40-5	C.I. Disperse Orange 3				
82-28-0	C.I. Disperse Orange 11				
12223-33-5	C.I. Disperse Orange 37/76/59				
13301-61-6					
51811-42-8					
85136-74-9	C.I. Disperse Orange 149				





## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
<b>DYES: DISPERSE</b> 					
2872-52-8	C.I. Disperse Red 1	30 ppm each	15 ppm each	<p>Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g., polyester, acetate, polyamide).</p> <p>Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.</p>	All materials: DIN 54231:2022
2872-48-2	C.I. Disperse Red 11				
3179-89-3	C.I. Disperse Red 17				
61968-47-6	C.I. Disperse Red 151				
119-15-3	C.I. Disperse Yellow 1				
2832-40-8	C.I. Disperse Yellow 3				
6300-37-4	C.I. Disperse Yellow 7				
6373-73-5	C.I. Disperse Yellow 9				
6250-23-3	C.I. Disperse Yellow 23				
12236-29-2	C.I. Disperse Yellow 39				
54824-37-2	C.I. Disperse Yellow 49				
54077-16-6	C.I. Disperse Yellow 56				






## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
	DYES: ACID, BASIC, DIRECT, OTHER 				
3761-53-3	C.I. Acid Red 26	30 ppm each	15 ppm each	Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fiber (e.g., polyester, acetate, polyamide).  Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles	All materials: DIN 54231:2022
569-61-9	C.I. Basic Red 9				
569-64-2	C.I. Basic Green 4				
2437-29-8					
10309-95-2					
548-62-9	C.I. Basic Violet 3				
632-99-5	C.I. Basic Violet 14				
2580-56-5	C.I. Basic Blue 26				
1937-37-7	C.I. Direct Black 38				
2602-46-2	C.I. Direct Blue 6				
573-58-0	C.I. Direct Red 28				
16071-86-6	C.I. Direct Brown 95				
60-11-7	4-Dimethylaminoazobenzene (Solvent Yellow 2)				
6786-83-0	C.I. Solvent Blue 4				
561-41-1	4,4'-bis(dimethylamino)-4''-(methylamino) trityl alcohol)				
DYES: NAVY BLUE 					
118685-33-9	Component 1: C39H23ClCrN7O12S·2Na	30 ppm each	15 ppm each	Navy blue colorants are regulated and prohibited from use for dyeing of textiles. Index 611-070-00-2	All materials: DIN 54231:2022
Not allocated	Component 2: C46H30CrN10O20S2·3Na				





## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
FLAME RETARDANTS 					
84852-53-9	Decabromodiphenyl ethane (DBDPE)	10 ppm each	5 ppm each	<p>Flame-retardant substances, including the entire class of organohalogen flame retardants, should no longer be applied to materials during production.</p> <p>Listed here are examples of flame-retardant substances used historically across the apparel and footwear industry. It is not intended to be a complete list. Other flame retardants not applicable to this industry are regulated worldwide by the Stockholm Convention and the Aarhus Protocol, which have been implemented in the European Union under the POPs Regulation.</p> <p>The 10 ppm limit is established to account for incidental impurities, byproducts, and contaminants. Flame retardants should not be used for any other purpose, e.g., as softeners or plasticizers.</p>	All materials: EN ISO 17881-1:2016
32534-81-9	Pentabromodiphenyl ether (PentaBDE)				
32536-52-0	Octabromodiphenyl ether (OctaBDE)				
1163-19-5	Decabromodiphenyl ether (DecaBDE)				
Various	All other Polybrominated diphenyl ethers (PBDEs)				
79-94-7	Tetrabromobisphenol A (TBBP A)				
59536-65-1	Polybromobiphenyls (PBB)				
3194-55-6	Hexabromocyclododecane (HBCDD)				All materials: EN ISO 17881-2:2016
3296-90-0	2,2-bis(bromomethyl)-1,3-propanediol (BBMP)				
13674-87-8	Tris(1,3-dichloro-isopropyl) phosphate (TDCPP)				
25155-23-1	Trixylyl phosphate (TXP)				
126-72-7	Tris(2,3-dibromopropyl) phosphate (TRIS)				
545-55-1	Tris(1-aziridiny) phosphine oxide) (TEPA)				
115-96-8	Tris(2-chloroethyl) phosphate (TCEP)				
5412-25-9	Bis(2,3-dibromopropyl) phosphate (BDBPP)				





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FLUORINATED GREENHOUSE GASES 					
Various	See Regulation (EU) No 517/2014 for a complete list.	0.1 ppm each	0.1 ppm each	Prohibited from use.  May be used as foam-blowing agents, solvents, fire retardants and aerosol propellants.	Sample preparation: Purge and trap – thermal desorption or SPME  Measurement: GC/MS
FORMALDEHYDE 					
50-00-0	Formaldehyde	Adults & Children: 75 ppm  Infants & Toddlers: 16 ppm	16 ppm	Used in textiles as an anti-creasing and anti-shrinking agent. It is also often used in polymeric resins.  Although very rare in Apparel and Footwear, composite wood materials (such as particle board and plywood) must comply with existing California and forthcoming U.S. Formaldehyde emission requirements (40 CFR 770).  Important: United Arab Emirates Cabinet Resolution No. (54) restricts Formaldehyde in children's textiles to 20 ppm.  Indonesia Ministerial Regulation No. 18 limits Formaldehyde to "not detected" (16 ppm) in towels, bedding, and handkerchiefs.	All materials except leather: JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011  Leather: EN ISO 17226-2:2019 with EN ISO 17226-1:2021 confirmation method in case of interferences  Alternatively, EN ISO 17226-1:2021 can be used on its own.






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HEAVY METALS: NON-JEWELRY • EXTRACTABLE  & TOTAL CONTENT 					
7440-36-0	Antimony (Sb)	Extractable: 30 ppm	Extractable: 3 ppm	Found in or used as a catalyst in polymerization of polyester, flame retardants, fixing agents, pigments and alloys.	All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019
7440-38-2	Arsenic (As)	Extractable: 0.2 ppm  Total: 100 ppm	Extractable: 0.1 ppm  Total: 10 ppm	Arsenic and its compounds can be used in preservatives, pesticides and defoliants for cotton, synthetic fibers, paints, inks, trims and plastics.  South Korea KC Mark Soluble Heavy Metal Arsenic limit is 25 ppm.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019  Total: All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019
7440-39-3	Barium (Ba)	Extractable: 1000 ppm	Extractable: 100 ppm	Barium and its compounds can be used in pigments for inks, plastics, surface coatings, as well as in dyeing, mordant, filler in plastics, textile finish, and leather tanning.	All materials except leather: DIN EN 16711-2:2016  Leather: DIN EN ISO 17072-1:2019
7440-43-9	Cadmium (Cd)	Extractable: 0.1 ppm  Total: 40 ppm	Extractable: 0.05 ppm  Total: 5 ppm	Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides and paints.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019  Total: All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019



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CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
HEAVY METALS: NON-JEWELRY • EXTRACTABLE & TOTAL CONTENT					
7440-47-3	Chromium (Cr)	Extractable: Textiles: Adults & Children: 2 ppm  Infants & Toddlers: 1 ppm  Leather: Info only	Extractable: 0.5 ppm	Chromium compounds can be used as dyeing additives, dye-fixing agents, color fastness after-treatments, dyes for wool, silk and polyamide (especially dark shades) and leather tanning.  Important: Egypt restricts extractable Chromium to 2 ppm in leather products for babies and 200 ppm in leather products for other ages.	Textiles: DIN EN 16711-2:2016  Leather: EN ISO 17072-1:2019
18540-29-9	Chromium VI 	Extractable: Leather: 3 ppm  Textiles: 1 ppm	Extractable: Leather: 3 ppm  Textiles: 0.5 ppm	Though typically associated with leather tanning, Chromium VI also may be used in the “after-chroming” process for wool dyeing (Chrome salts applied to acid-dyed wool to improve fastness).	Textiles: DIN EN 16711-2:2016 with EN ISO 17075-1:2017 if Cr is detected  Leather: EN ISO 17075-1:2017 and EN ISO 17075-2:2017 for confirmation in case the extract causes interference.  Alternatively, EN ISO 17075-2:2017 may be used on its own.  Ageing test: ISO 10195:2018 Method A2 is used at Nike’s discretion.




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HEAVY METALS: NON-JEWELRY • EXTRACTABLE & TOTAL CONTENT					
7440-48-4	Cobalt (Co)	Extractable: Adults: 4 ppm  Infants, Toddlers & Children: 1 ppm	Extractable: 0.5 ppm	Cobalt and its compounds can be used in alloys, pigments, dyestuff and the production of plastic buttons.	All materials except leather: DIN EN 16711-2:2016  Leather: DIN EN ISO 17072-1:2019
7440-50-8	Copper (Cu)	Extractable: Adults: 50 ppm  Infants, Toddlers & Children: 25 ppm	Extractable: 5 ppm	Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent.  Copper is exempt from restriction limits in metal parts.  Indonesia Ministerial Regulation No. 18 limits copper to 25 ppm in towels, bedding and handkerchiefs.	All materials except leather: DIN EN 16711-2:2016  Leather: DIN EN ISO 17072-1:2019
7439-92-1	Lead (Pb)	Extractable: Adults: 1 ppm  Infants, Toddlers & Children: 0.2 ppm  Total: 90 ppm	Extractable: 0.2 ppm  Total: 10 ppm	May be associated with alloys, plastics, paints, inks, pigments and surface coatings.  Crystal or “lead glass” is exempt from total Lead restrictions.  Indonesia Ministerial Regulation No. 18 limits extractable Lead to 0.2 ppm in towels, bedding and handkerchiefs.	Extractable: All materials except leather: DIN EN 16711-2:2016  Leather: DIN EN ISO 17072-1:2019  Total: Non-metal: CPSC- CH-E1002-08.3  Metal: CPSC- CH-E1001-08.3  Lead in paint and surface coatings: CPSC- CH-E1003-09.1







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HEAVY METALS: NON-JEWELRY • EXTRACTABLE & TOTAL CONTENT					
7439-97-6	Mercury (Hg)	Extractable: 0.02 ppm  Total: 0.5 ppm	Extractable: 0.02 ppm  Total: 0.1 ppm	Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints and as catalysts in the manufacturing of PU and vinyl chloride for use in PVC.	Extractable: All materials except leather: DIN EN 16711-2:2016  Leather: DIN EN ISO 17072-1:2019  Total: All materials except leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019
7440-02-0	Nickel (Ni) 	Extractable: 1 ppm  Release (metal parts): Prolonged skin contact: 0.5 µg/cm <sup>2</sup> /week  Eyewear frames: 0.5 µg/cm <sup>2</sup> /week	Extractable: 0.1 ppm  Release: 0.5 µg/cm <sup>2</sup> /week	Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.	Extractable: All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019  Release: EN 12472:2020 and EN 1811:2023  Release (eyewear frames): EN 16128:2015
7782-49-2	Selenium (Se)	Extractable: 500 ppm	Extractable: 50 ppm	May be found in synthetic fibers, paints, inks, plastics and metal trims.	All materials except leather: DIN EN 16711-2:2016 Leather: DIN EN ISO 17072-1:2019




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HEAVY METALS: JEWELRY • EXTRACTABLE  & TOTAL CONTENT 					
7440-36-0	Antimony (Sb)	Paints & Coatings: Extractable: 60 ppm	Extractable: 5 ppm	Antimony and its compounds can be found as a flame retardant in paints, as well as a colorant in pigments.	ASTM F963-17 as referenced in ASTM F2923:2020  Sample preparation for jewelry and wearables:  Wax areas not intended for skin contact: EN 1811:2011+A1:2015
7440-38-2	Arsenic (As)	Paints & Coatings: Extractable: 25 ppm	Extractable: 5 ppm	Arsenic and its compounds can be found in paints and inks.	
7440-39-3	Barium (Ba)	Paints & Coatings: Extractable: 1000 ppm	Extractable: 100 ppm	Barium and its compounds can be found in pigments for inks.	
7440-43-9	Cadmium (Cd)	Substrates, Paints & Coatings:  Total: Adults: 75 ppm Children: 40 ppm	Total: 5 ppm	Cadmium and its compounds are typically used as pigments (especially in red, orange, yellow, and green). It can also be used in alloys to improve hardness or be found as a contaminant.	
7440-47-3	Chromium (Cr)	Paints & Coatings: Extractable: 60 ppm	Extractable: 5 ppm	Chromium and its compounds can be used as pigments in paints. It can also be used as part of alloys such as stainless steel.	
7439-92-1	Lead (Pb)	Substrates, Paints & Coatings: Total: 90 ppm	Total: 10 ppm	Lead and its compounds may be associated with plastics, paints, inks, pigments, and surface coatings. It can also be found in metals as a contaminant.  Crystal or “lead glass” is exempt from total Lead restrictions.	





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HEAVY METALS: JEWELRY • EXTRACTABLE & TOTAL CONTENT					
7439-97-6	Mercury (Hg)	Paints & Coatings: Extractable: 60 ppm	Extractable: 5 ppm	Mercury and its compounds may be used in paints and can be found as a contaminant in alloys and in gold due to its use during the extraction process.	ASTM F963-17 as referenced in ASTM F2923:2020
7440-02-0	Nickel (Ni) 	Release (metal parts): Prolonged skin contact: 0.5 µg/cm <sup>2</sup> /week  Pierced part: 0.2 µg/cm <sup>2</sup> /week	Release: Prolonged skin contact: 0.5 µg/cm <sup>2</sup> /week  Pierced part: 0.2 µg/cm <sup>2</sup> /week	Nickel and its compounds can be used for plating alloys and improving the corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.	EN 12472:2020 and EN 1811:2023
7782-49-2	Selenium (Se)	Paints & Coatings: Extractable: 500 ppm	Extractable: 50 ppm	Selenium and its compounds may be found in paints and inks.	ASTM F963-17 as referenced in ASTM F2923:2020








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MONOMERS 					
100-42-5	Styrene, Free	500 ppm	50 ppm	Styrene is a precursor for polymerization and may be present in various styrene-copolymers like plastic buttons. Free styrene is restricted, not total styrene.	Extraction in Methanol GC/MS, sonication at 60°C for 60 minutes
75-01-4	Vinyl Chloride	Nike prohibits the use of PVC in all materials and products.	1 ppm	Vinyl chloride is a precursor for polymerization and may be present in various PVC materials like prints, coatings, flip flops and synthetic leather.	EN ISO 6401:2022
N-NITROSAMINES 					
62-75-9	N-nitrosodimethylamine (NDMA)	0.5 ppm each	0.5 ppm each	Can be formed as a by-product in the production of rubber.	EN ISO 19577:2019 with LC/MS/MS verification if positive
55-18-5	N-nitrosodiethylamine (NDEA)				
621-64-7	N-nitrosodipropylamine (NDPA)				
924-16-3	N-nitrosodibutylamine (NDBA)				
100-75-4	N-nitrosopiperidine (NPIP)				
930-55-2	N-nitrosopyrrolidine (NPYR)				
59-89-2	N-nitrosomorpholine (NMOR)				
614-00-6	N-nitroso N-methyl N-phenylamine (NMPHA)				
612-64-6	N-nitroso N-ethyl N-phenylamine (NEPHA)				




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ORGANOTIN COMPOUNDS 					
Various	Dibutyltin (DBT)	Adults: 20 ppm each 1-20 ppm = warning range; follow up required	0.1 ppm each	Class of chemicals combining Tin and Organics such as butyl and phenyl groups. Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials), catalysts in plastic and glue production, and heat stabilizers in plastics/rubber. In textiles and apparel, organotins are associated with plastics / rubber, inks, paints, metallic glitter, polyurethane products and heat-transfer material.	All materials: CEN ISO/TS 16179:2012 or EN ISO 22744-1: 2020
Various	Diocetyltn (DOT)				
Various	Monobutyltin (MBT)				
Various	Tricyclohexyltin (TCyHT)				
Various	Trimethyltin (TMT)				
Various	Triocetyltn (TOT)	Infants/Toddlers: 1 ppm each			
Various	Tripropyltin (TPT)				
Various	Tributyltin (TBT)				
Various	Triphenyltin (TPHt)	0.5 ppm each			
ORTHO-PHENYLPHENOL 					
90-43-7	Ortho-phenylphenol (OPP)	1000 ppm	100 ppm	OPP can be used for its preservative properties in leather or as a carrier in dyeing processes.	All materials: DIN 50009:2021
OZONE-DEPLETING SUBSTANCES 					
Various	See Regulation (EC) No 1005/2009 for a complete list.	5 ppm	5 ppm	Prohibited from use.  Ozone-depleting substances have been used as a foaming agent in PU foams as well as a dry-cleaning agent.	All materials: GC/MS headspace 120°C for 45 minutes



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PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	ALL PFAS AS MEASURED BY TOTAL ORGANIC FLUORINE			<div>Prohibited from use.</div> <div>Regulations around the world ban the use of PFAS in apparel and footwear, with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.</div> <div>See <a href="#">California AB 1817</a>.</div> <div>PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.</div> <div>Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.</div>	
Various	All PFAS	100 ppm by 2025 50 ppm by 2027	50 ppm total		EN 14582:2016 or ASTM D7359:2018
	PERFLUOROCTANE SULFONATE (PFOS) & RELATED SUBSTANCES				<div>All materials: EN ISO 23702-1 or EN 17681-1:2022 &amp; 17681-2:2022</div>
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1 µg/m² total	1 µg/m² total		
2795-39-3	Perfluorooctanesulfonic acid, potassium salt (PFOS-K)				
29457-72-5	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)				
29081-56-9	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH4)				
70225-14-8	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)₂)				
56773-42-3	Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C₂H₅)₄)				
251099-16-8	Didecylmethyl ammonium perfluorooctane sulfonate (PFOS-N(C10H21)2(CH3)2)				
4151-50-2	N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)				
31506-32-8	N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)				
1691-99-2	2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)				
24448-09-7	2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)				
307-35-7	Perfluoro-1-octanesulfonyl fluoride (POSF)				
754-91-6	Perfluorooctane sulfonamide (PFOSA)				





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PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)					
	PERFLUOROCTANOIC ACID (PFOA) AND ITS SALTS			Prohibited from use.  Regulations around the world ban the use of PFAS in apparel and footwear, with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.	All materials: EN ISO 23702-1 or EN 17681-1:2022 & 17681-2:2022
335-67-1	Perfluorooctanoic acid (PFOA)	25 ppb total	25 ppb total		
335-95-5	Sodium perfluorooctanoate (PFOA-Na)				
2395-00-8	Potassium perfluorooctanoate (PFOA-K)				
335-93-3	Silver perfluorooctanoate (PFOA-Ag)				
335-66-0	Perfluorooctanoyl fluoride (PFOA-F)				
3825-26-1	Ammonium pentadecafluorooctanoate (APFO)				
	PFOA-RELATED SUBSTANCES			See <a href="#">California AB 1817</a> .	
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	1000 ppb total	1000 ppb total	PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.	
376-27-2	Methyl perfluorooctanoate (Me-PFOA)			Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	
3108-24-5	Ethyl perfluorooctanoate (Et-PFOA)				
678-39-7	Perfluorocylethanol 8:2 (8:2 FTOH)				
27905-45-9	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)				
1996-88-9	1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)				
27854-31-5	2H,2H-Perfluorodecanoic acid (H2PFDA)				



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PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)					
	PFHxS-RELATED SUBSTANCES			Prohibited from use.	
68259-15-4	N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	1000 ppb total	1000 ppb total		
41997-13-1	Perfluorohexane sulfonamide (PFHxSA)				
	C9-C14 PERFLUOROCARBOXYLIC ACIDS (PFCAs) AND THEIR SALTS			Regulations around the world ban the use of PFAS in apparel and footwear, with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.  See <a href="#">California AB 1817</a> .  PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.  Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials:  EN ISO 23702-1 or EN 17681-1:2022 & 17681-2:2022
375-95-1	Perfluorononanoic Acid (PFNA, C9-PFCA)	25 ppb total	25 ppb total		
335-76-2	Perfluorodecanoic Acid (PFDA, C10-PFCA)				
2058-94-8	Perfluoroundecanoic Acid (PFUnA, C11-PFCA)				
307-55-1	Perfluorododecanoic Acid (PFDoA, C12-PFCA)				
72629-94-8	Perfluorotridecanoic Acid (PFTTrDA, C13-PFCA)				
376-06-7	Perfluorotetradecanoic Acid (PFTeDA, C14-PFCA)				
172155-07-6	Perfluoro-3-7-dimethyloctanecarboxylate (PF-3,7-DMOA)				



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PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)					
	C9-C14 PFCA-RELATED SUBSTANCES			<p>Prohibited from use.</p> <p>Regulations around the world ban the use of PFAS in apparel and footwear, with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.</p> <p>See <a href="#">California AB 1817</a>.</p> <p>PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.</p> <p>Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.</p>	<p>All materials:</p> <p>EN ISO 23702-1 or EN 17681-1:2022 &amp; 17681-2:2022</p>
17741-60-5	1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)	260 ppb total	260 ppb total		
2144-54-9	1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)				
865-86-1	1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)				
34598-33-9	2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA)				
678-39-7	Perfluorocylethanol 8:2 (8:2 FTOH)				
39239-77-5	1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)				
120226-60-0	1H,1H,2H,2H-Perfluorododecanesulphonic acid (10:2 FTS)				
2043-54-1	1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI)				
30046-31-2	1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)				







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<b>PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)</b>					
	<b>PERFLUOROHXANE-1-SULPHONIC ACID (PFHxS) AND ITS SALTS</b>			Prohibited from use.	
355-46-4	Perfluorohexane Sulfonic acid (PFHxS)	25 ppb total	25 ppb total	<p>Regulations around the world ban the use of PFAS in apparel and footwear, with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.</p> <p>See <a href="#">California AB 1817</a>.</p> <p>PFAS has been used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.</p> <p>Refer to this list to understand which testing can be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.</p>	<p>All materials: EN ISO 23702-1 or EN 17681-1:2022 &amp; 17681-2:2022</p>
3871-99-6	Perfluorohexane Sulfonic acid, potassium salt (PFHxS-K)				
55120-77-9	Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)				
68259-08-5	Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH <sub>4</sub> )				
82382-12-5	Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)				
	<b>OTHER PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAS)</b>				
307-24-4	Perfluorohexanoic Acid (PFHxA, C6-PFCA)	For information purposes only. Testing recommended to assess content levels.	100 ppb total		



## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
PESTICIDES: AGRICULTURAL & RESIDUAL 					
Various	Refer to list of pesticides in Appendix C of the current AFIRM RSL. <a href="http://www.afirm-group.com/afirm-rsl">www.afirm-group.com/afirm-rsl</a>	0.5 ppm each	0.5 ppm each	May be found in natural fibers, primarily cotton.	All materials: ISO 15913/DIN 38407 F2 or EPA 8081/EPA 8151A or BVL L 00.00-34:2010-09
PHthalATES 					
28553-12-0	Di-isononylphthalate (DINP)	500 ppm each Total: 1000 ppm	50 ppm each	<p>Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature.</p> <p>Phthalates can be found in:</p> <ul style="list-style-type: none"> <li>• Flexible plastic components (e.g., PVC)</li> <li>• Print pastes</li> <li>• Adhesives</li> <li>• Plastic buttons</li> <li>• Plastic sleeveings</li> <li>• Polymeric coatings</li> </ul> <p>Listed here are all legally restricted Phthalates as well as those included on the REACH SVHC candidate list at the time of publication.</p>	<p>Sample preparation: CPSC-CH-C1001-09.4</p> <p>Measurement:</p> <p>Textiles: GC/MS, EN ISO 14389:2022 8.1 calculation based on weight of print only; 8.2 Calculation based on weight of print and textile if print cannot be removed</p> <p>All materials except textiles: GC/MS</p>
117-84-0	Di-n-octylphthalate (DNOP)				
117-81-7	Di(2-ethylhexyl)-phthalate (DEHP)				
26761-40-0	Diisodecylphthalate (DIDP)				
85-68-7	Butylbenzylphthalate (BBP)				
84-74-2	Dibutylphthalate (DBP)				
84-69-5	Diisobutylphthalate (DIBP)				
84-75-3	Di-n-hexylphthalate (DnHP)				
84-66-2	Diethylphthalate (DEP)				
131-11-3	Dimethylphthalate (DMP)				
131-18-0	Di-n-pentyl phthalate (DPENP)				




## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
PHthalATES					
84-61-7	Dicyclohexyl phthalate (DCHP)	500 ppm each Total: 1000 ppm	50 ppm each	<p>Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature.</p> <p>Phthalates can be found in:</p> <ul style="list-style-type: none"> <li>• Flexible plastic components (e.g., PVC)</li> <li>• Print pastes</li> <li>• Adhesives</li> <li>• Plastic buttons</li> <li>• Plastic sleeveings</li> <li>• Polymeric coatings</li> </ul> <p>Listed here are all legally restricted Phthalates as well as those included on the REACH SVHC candidate list at the time of publication.</p>	<p>Sample preparation: CPSC-CH-C1001-09.4</p> <p>Measurement:</p> <p>Textiles: GC/MS, EN ISO 14389:2022</p> <p>8.1 Calculation based on weight of print only; 8.2 Calculation based on weight of print and textile if print cannot be removed.</p> <p>All materials except textiles: GC/MS</p>
71888-89-6	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich				
117-82-8	Bis(2-methoxyethyl) phthalate				
605-50-5	Diisopentyl phthalate (DIPP)				
131-16-8	Dipropyl phthalate (DPRP)				
27554-26-3	Diisooctyl phthalate (DIOP)				
68515-50-4	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear				
71850-09-4	Diisohexyl phthalate (DIHxP)				
68515-42-4	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)				
84777-06-0	1,2-Benzenedicarboxylic acid Dipentyl ester, branched and linear				
68648-93-1	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters;				
68515-51-5	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters				
776297-69-9	n-Pentyl-isopentylphthalate (nPIPP)				







## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) 					
83-32-9	Acenaphthene	No individual restriction	Total: 10 ppm	0.2 ppm each	<p>PAHs are natural components of crude oil and are common residues from oil refining. PAHs have a characteristic smell similar to that of car tires or asphalt.</p> <p>Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers and coatings. PAHs are often found in the outsoles of footwear and in printing pastes for screen prints. PAHs can be present as impurities in Carbon Black. They also may be formed from thermal decomposition of recycled materials during reprocessing.</p> <p>* Naphthalene Dispersing agents for textile dyes may contain high residual Naphthalene concentrations due to the use of low-quality Naphthalene derivatives (e.g., poor-quality Naphthalene Sulphonate Formaldehyde condensation products).</p>
208-96-8	Acenaphthylene				
120-12-7	Anthracene				
191-24-2	Benzo(g,h,i)perylene				
86-73-7	Fluorene				
206-44-0	Fluoranthene				
193-39-5	Indeno(1,2,3-cd) pyrene				
91-20-3	Naphthalene*				
85-01-8	Phenanthrene				
129-00-0	Pyrene	1 ppm each Child care articles: 0.5 ppm each	Total: 10 ppm	0.2 ppm each	<p>All materials: AFPS GS 2019 or EN 17132 or ISO 16190</p>
56-55-3	Benzo(a)anthracene				
50-32-8	Benzo(a)pyrene				
205-99-2	Benzo(b)fluoranthene				
192-97-2	Benzo[e]pyrene				
205-82-3	Benzo[j]fluoranthene				
207-08-9	Benzo(k)fluoranthene				
218-01-9	Chrysene	1 ppm each Child care articles: 0.5 ppm each	Total: 10 ppm	0.2 ppm each	
53-70-3	Dibenzo(a,h)anthracene				




## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
QUINOLINE 					
91-22-5	Quinoline	50 ppm	10 ppm	Found as an impurity in polyester and some dyestuffs. Quinoline can be included with disperse dye testing, as the same method is used for both.	All materials: DIN 54231:2022 with methanol extraction at 70°C
SOLVENTS & RESIDUALS 					
68-12-2	Dimethylformamide (DMFa)	500 ppm	50 ppm each	DMFa is a solvent used in plastics, rubber and polyurethane (PU) coating. Water-based PU does not contain DMFa and is therefore preferable.	Textiles: EN 17131:2019  All other materials: ISO 16189:2021
75-12-7	Formamide	1000 ppm each	50 ppm each	Potential byproduct in the production of some EVA foams.  Taiwan CNS 15493: BSMI may enforce a limit of 200 ppm in yoga mats under authority of the Consumer Protection Act.	
127-19-5	Dimethylacetamide (DMAC)			DMAC is a solvent used in the production of elastane fibers and sometimes as a substitute for DMFa.	
872-50-4	N-Methyl-2-pyrrolidone (NMP)			Industrial solvent used in the production of water-based PUs and other polymeric materials. May also be used for surface treatment of textiles, resins and metal coated plastics, or as a paint stripper.	




## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
UV ABSORBERS & STABILIZERS 					
3846-71-7	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV 320)	1000 ppm each	100 ppm each	PU foam materials such as open-cell foams for padding. Potential uses as UV-absorbers for plastics (PET, PC, PA, ABS and other polymers), rubber and polyurethane.	ISO 24040 with extraction in THF, analysis by GC/MS
3864-99-1	2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV 327)				
25973-55-1	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV 328)				
36437-37-3	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV 350)				
2440-22-4	Drometrizole	For informational purposes only.		Used as UV absorbers for plastics (PVC, PET, PC, PA, ABS, and other polymers), rubber and polyurethane.	





## NIKE RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
VOLATILE ORGANIC COMPOUNDS (VOCs) 					
71-43-2	Benzene	5 ppm	5 ppm	<p>These VOCs should not be used in textile auxiliary chemical preparations.</p> <p>They are also associated with solvent-based processes such as solvent-based Polyurethane coatings and glues / adhesives.</p> <p>They should not be used for any kind of facility cleaning or spot cleaning.</p>	For general VOC screening: GC/MS headspace 120°C, 45 minutes.
75-15-0	Carbon Disulfide	Total: 1000 ppm	20 ppm each		
56-23-5	Carbon tetrachloride				
67-66-3	Chloroform				
108-94-1	Cyclohexanone				
107-06-2	1,2-Dichloroethane				
75-35-4	1,1-Dichloroethylene				
76-01-7	Pentachloroethane				
100-41-4	Ethylbenzene				
630-20-6	1,1,1,2- Tetrachloroethane				
79-34-5	1,1,2,2- Tetrachloroethane				
127-18-4	Tetrachloroethylene (PERC)				
108-88-3	Toluene				
71-55-6	1,1,1- Trichloroethane				
79-00-5	1,1,2- Trichloroethane				
79-01-6	Trichloroethylene				
1330-20-7	Xylenes (meta-, ortho-, para-)				
108-38-3					
95-47-6					
106-42-3					



## NIKE-SPECIFIC CHEMICAL & MATERIAL RESTRICTIONS

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
<b>ASBESTOS</b>					
77536-66-4	Actinolite	Not detected	Not applicable Presence/absence only	No intentional uses	Microscopic examination; minimum magnification  1-250, polarized light filter attached; ratio of fiber length to diameter is at least 3:1.
12172-73-5	Amosite				
77536-67-5	Anthrophyllite				
12001-29-5	Chrysotile				
12001-28-4	Crocidolite				
77536-68-6	Tremolite				



## NIKE-SPECIFIC CHEMICAL & MATERIAL RESTRICTIONS

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
DIOXINS & FURANS					
40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	Group 1  Sum of Group 1: 1 µg/kg	0.1 µg/kg per congener (Dioxin or Furan)	No intentional use in Apparel or Footwear manufacturing.	USEPA 8290
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran				
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran				
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	Group 2  Sum of Groups 1 and 2: 5 µg/kg			
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran				
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin				
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran				
57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin				
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran				
19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin				
57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran				
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	Group 3  Sum of Groups 1, 2 and 3: 100 µg/kg			
39001-02-0	1,2,3,4,6,7,8,9-Octachlorodibenzofuran				
3268-87-9	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin				
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran				
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	Group 4  Sum of Group 4: 1 µg/kg			
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran				
109333-34-8	1,2,3,7,8-Pentabromodibenzo-p-dioxin				
131166-92-2	2,3,4,7,8-Pentabromdibenzofuran				
67733-57-7	2,3,7,8-Tetrabromodibenzofuran	Group 5  Sum of Groups 4 and 5: 5 µg/kg			
50585-41-6	2,3,7,8-Tetrabromodibenzo-p-dioxin				
110999-44-5	1,2,3,4,7,8-Hexabromodibenzo-p-dioxin				
110999-45-6	1,2,3,6,7,8-Hexabromodibenzo-p-dioxin				
110999-46-7	1,2,3,7,8,9-Hexabromodibenzo-p-dioxin				
107555-93-1	1,2,3,7,8-Pentabromodibenzofuran				





## NIKE-SPECIFIC CHEMICAL & MATERIAL RESTRICTIONS

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
POLYVINYL CHLORIDE (PVC)					
9002-86-2	Polyvinyl Chloride (PVC)	Prohibited from use in all products and all materials.	Due to complexity of analysis, Nike defines detection limit as 10%.	Plastic items, flexible plastics, screen-printing inks.	Infrared (IR) spectroscopy with or without solvent extraction.

## OTHER LIMITS & RESTRICTIONS

CAS NO.	LIST	NIKE COMPLIANCE REQUIREMENTS
Various	REACH SVHC listed chemistries <a href="http://www.echa.europa.eu/candidate-list-table">www.echa.europa.eu/candidate-list-table</a> California Proposition 65 listed chemistries <a href="http://www.oehha.ca.gov/proposition-65">www.oehha.ca.gov/proposition-65</a>	Suppliers must notify Nike immediately if substances found on either of these lists are identified in materials or products.



RULES OF THE GAME

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# NIKE RSL IMPLEMENTATION GUIDANCE

## OVERVIEW

All materials, items and finished products manufactured for or supplied to Nike and its Licensees must comply with the requirements in the Nike Chemistry Playbook as well as applicable legal limits and regulatory requirements.

This document is subject to updates. If requirements change, we will issue an effective date (page 39) that allows suppliers sufficient time to comply, unless new or forthcoming legislation must result in short notice.

The most up-to-date version of this document can be found at the Nike Chemistry website. <https://chemistry.nike.com/resources>

## ONLINE RSL TESTING APPLICATION

All suppliers must log in to the Nike RSL Testing Application to create, submit and print a Test Request Form (TRF). To access the Nike RSL Testing Application, please visit <https://rsltesting.nike.com>.

To request access to the RSL Testing Application, visit the Nike Chemistry website to download the Nike-RSL Application Login Assistance Guide. For further assistance, contact [RSLSupport@nike.com](mailto:RSLSupport@nike.com).

## NIKE-APPROVED LABORATORIES

Nike only accepts data from approved laboratories as proof of compliance. A list of Nike-Approved Laboratories can be found in the Contacts section of this document. Each material is tested against the designated Nike RSL Test Package.

## TYPES OF TESTING

Nike employs two testing approaches:

### 1 STANDARD TESTING

Suppliers use the implementation guidance on the following pages and send samples for testing as described.

### 2 DIRECTIVE TESTING

Nike may choose to implement a directive testing approach for a particular supplier. Rather than using the standard implementation guidance, Nike RSL Teams work directly with the supplier to test specific materials in a given season. Directive testing is in addition to tests the supplier undertakes to ensure RSL compliance, as well as to any testing that a finished goods factory may request.

## SELECTING TEST SAMPLES

The Materials Testing Matrix on page 84 outlines required test packages by material type. Material-specific guidance detailing how to select samples for testing follows the Materials Testing Matrix.

For example, suppliers choose natural leather and coated leather test samples based on production volumes, but chemical testing is distinct for the two materials because of differing base chemistries and processing steps.

Nike no longer requires samples to be wrapped in aluminum/tin foil. Instead, we request that suppliers package samples appropriately based on the sample type. Paper envelopes, plastic bags, bubble wrap, etc. are all valid choices for packaging so long as the sample reaches the lab undamaged and unaltered.

## TEST SAMPLE DESIGNATIONS

When filling out a TRF on the RSL Testing Application, suppliers must select between these two types of samples:

### 1 PRODUCTION-READY MATERIAL TEST SAMPLES

These samples are representative of materials used in the production of finished goods and must use the same input chemicals and process steps as in production. To receive a PASS result, suppliers must submit production-ready material test samples without changes to starting materials or processing steps.

### 2 RESEARCH AND DEVELOPMENT (R&D) MATERIAL TEST SAMPLES

When developing new materials or processes, material suppliers may submit R&D samples at any time for any subset of chemistries as required by the supplier. R&D test samples are for informational purposes only and cannot achieve a PASS result.



# NIKE RSL IMPLEMENTATION GUIDANCE

## FINISHED GOODS FACTORY TESTING

The Nike COC requires finished goods factories to maintain a program that ensures compliance with the Nike RSL. The Nike RSL team strongly recommends that finished goods factories test materials received from external suppliers as well as those produced in-house. This testing helps protect finished goods factories from inadvertent RSL violations by identifying issues prior to production. We encourage finished goods factories to work directly with the Nike RSL team to identify which materials to test on a recurring basis. Please contact [RSLSupport@nike.com](mailto:RSLSupport@nike.com) for support.

## COMPONENTS & COMPLEX MATERIALS

The Nike RSL program classifies materials by category, as outlined in the Materials Test Matrix. However, there are components and complex materials not easily categorized, such as zippers (which can have metal, plastic and fabric components), painted items (which can have paint or lacquer applied on a metal or plastic base), combinations of materials that cannot be disjoined or separated by mechanical action, and more.

If suppliers have concerns or questions regarding how to classify a material or item on the TRF, please reach out to [RSLSupport@nike.com](mailto:RSLSupport@nike.com) for specific guidance.

## MATERIALS TESTING PROGRAM

The RSL testing implementation program outlined in the Materials Testing Matrix on page 77 is the minimum required testing.

New suppliers are required to provide RSL test results for all materials used in Nike products. All suppliers are required to provide test reports when requested by factories or Nike teams.

Nike strongly encourages suppliers to test more than the minimum number of materials listed herein against Nike RSL limits and confirm compliance with any applicable prohibitions and restrictions pursuant to REACH, the EU SVHC list, California Proposition 65 requirements, etc.

If suppliers have specific concerns about the chemistry of a material or product, such as compliance with any applicable prohibitions and restrictions, please reach out to [RSLSupport@nike.com](mailto:RSLSupport@nike.com).



**All finished goods must meet all Nike RSL requirements as well as applicable legal limits and regulatory requirements. The minimum testing frequency is based solely on historical information and may not represent a specific facility's production.**

## 1 TEST PACKAGE 1

Test Package 1 (TP1) tests a material in a given category for a defined set of chemical substances – substances that have been historically present in the material and place it at risk for RSL test failure.

## 2 TEST PACKAGE 2

Test Package 2 (TP2) includes all the substances in TP1, with additional specified substances.

NOTE: The Nike RSL Testing App automatically selects TP2 for every fifth sample submission:

- Samples 1-4 TP1
- Sample 5 TP1 + TP2
- Samples 6-9 TP1
- Sample 10 TP1 + TP2

## 3 TESTS FOR SUBSTANCES NOT LISTED AS TEST PACKAGES 1 OR 2

The blank cells in the Materials Testing Matrix indicate a lower risk of finding these substances — because they have been successfully phased out of the supply chain or have not been identified as a chemistry in use for the specified material. Suppliers using best practices for chemicals management are unlikely to find these substances; however, they are still responsible for ensuring materials and finished products meet applicable limits. Suppliers may request tests on these substances by selecting the individual test required in the RSL Testing App.





# NIKE RSL IMPLEMENTATION GUIDANCE

## TEST ADMINISTRATION

All testing must be performed on production-ready material — material identical to that used in actual product. While materials or products are undergoing RSL testing, they cannot be used in production until Nike receives a passing test report.

If a material or component fails RSL testing, all materials affected must be quarantined immediately. After product quarantine, suppliers must complete a failure resolution process with Nike.

Only materials that pass RSL testing requirements for Infants, Toddlers, and Children can be used for products intended for children, including any “take down” product.

- Prior to production, suppliers must provide factories with test results proving compliance with the Nike RSL.

- All RSL Tests must be submitted using the Nike RSL Testing Application
- All RSL Tests must be performed at a Nike-Approved Laboratory.
- Suppliers create a TRF in the online Nike RSL Testing Application and print a copy to accompany each test sample.
- Test results are valid for one year from the RSL test report date unless otherwise stated.
- Nike reserves the right to request testing documentation at any time.

## HANDLING RSL DATA

As shown in Figure 4, Nike-Approved Laboratories conduct testing and upload test results to the Nike RSL Testing Application.



**All finished goods must meet all Nike RSL requirements as well as the applicable legal limits and regulatory requirements — no matter which testing package is listed within the Materials Testing Matrix.**

The Nike RSL Testing Application stores test reports and allows suppliers to export data files. The Nike COC requires suppliers to maintain test reports for a minimum of 10 years.

Only test reports uploaded by Nike-Approved Laboratories to the Nike RSL Testing Application can be used to satisfy Nike requirements. Test results from non-approved laboratories are not accepted as proof of compliance.

Figure 4.  
NIKE RSL TESTING FLOWCHART



# NIKE RSL IMPLEMENTATION GUIDANCE

## FAILURE RESOLUTION

Suppliers must perform due diligence so that all shipped materials and components used on finished goods meet Nike RSL requirements. In the event of a FAIL or KID FAIL rating, suppliers must take immediate action. See the flowchart in Figure 5.

- Failed materials must be quarantined and isolated immediately; all shipping must be put on hold.
- The RSL Testing Application guides factories and suppliers through each step of the failure-

resolution process, including the Nike Quarantine Report Form (QRF) and the RSL Failure Resolution Form (FRF).

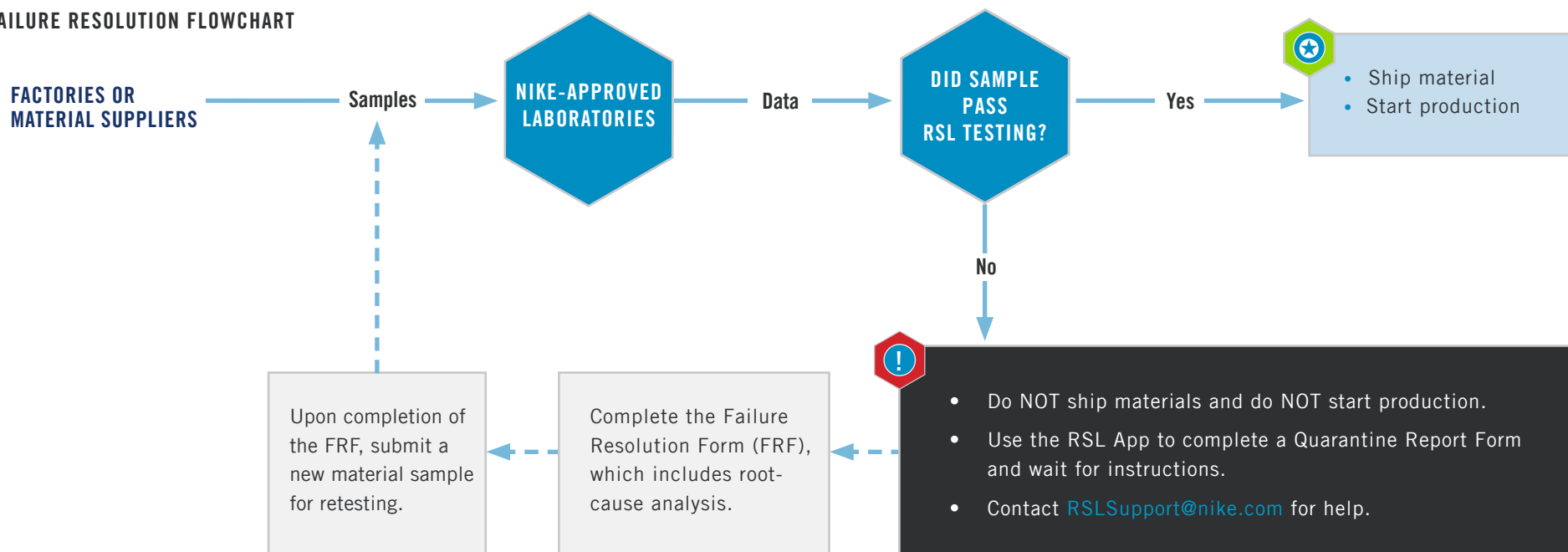
- After the supplier has found the root cause of the failure and fixed the issue, the material must be retested.
- Suppliers should not retest materials until they receive instruction to do so from Nike after the failure-resolution process is completed.

Failure to correctly address the root cause of the failure could result in significant consequences.

- If a supplier is deemed unreliable due to multiple material RSL failures, Nike, at its sole discretion, as provided for in applicable contractual agreements with that supplier, may place that supplier on probationary status. This may result in increased testing requirements.
- If a supplier on probation continues to supply non-compliant material, Nike may initiate further measures at its sole discretion. Measures may include termination of all business dealings with the supplier.

Figure 5.

### FAILURE RESOLUTION FLOWCHART



## MATERIALS TESTING MATRIX

RESTRICTED SUBSTANCE	NATURAL FIBERS	SYNTHETIC FIBERS Nylon, PET, Etc.	NATURAL & SYNTHETIC FIBER BLENDS	PLASTICS, THERMOPLASTICS & POLYMERS							SYNTHETIC LEATHER	NATURAL LEATHER	COATED LEATHER	INKS & PAINTS	SUBLIMATION & DIGITAL PRINTS	SCREENPRINT STRIKE-OFFS	ADHESIVES	METAL ITEMS
				EVA Materials	PU Foams	PU & TPU Other than Foams & Synthetic Leather	Rubber Materials	Polycarbonate & Epoxyed Materials	ABS Plastic Materials	All Other Foams, Plastics & Polymers								
Acetophenone & 2-Phenyl-2-Propanol				TP2														
Acidic & Alkaline Substances (pH)	TP2											TP2						
Alkylphenols (NP, OP)																		
Alkylphenol Ethoxylates (NPEO, OPEO)	TP1	TP1	TP1	TP1	TP2	TP2	TP1	TP2	TP1	TP1	TP2	TP2	TP1	TP1	TP1	TP1	TP1	
Asbestos	PROHIBITED																	
Azo-amines	TP1 (1)	TP1 (1)	TP1 (1)								TP1	TP2	TP2	TP1 (1, 2)	TP2			
Bisphenols (BPA, BPS, BPB, BPF, BPAF)								TP1										
Chlorinated Paraffin						TP2	TP2											
Chlorophenols		TP2	TP2															
Chlororganic Carriers		TP1																
Dimethylfumarate (DMFu)												TP2	TP2					
Dioxins & Furans	PROHIBITED																	
Dyes (Acid, Basic, Direct, Other)	TP2 (1)	TP2 (1)										TP2			TP2			



## MATERIALS TESTING MATRIX

RESTRICTED SUBSTANCE	NATURAL FIBERS	SYNTHETIC FIBERS Nylon, PET, Etc.	NATURAL & SYNTHETIC FIBER BLENDS	PLASTICS, THERMOPLASTICS & POLYMERS							SYNTHETIC LEATHER	NATURAL LEATHER	COATED LEATHER	INKS & PAINTS	SUBLIMATION & DIGITAL PRINTS	SCREENPRINT STRIKE-OFFS	ADHESIVES	METAL ITEMS
				EVA Materials	PU Foams	PU & TPU Other than Foams & Synthetic Leather	Rubber Materials	Polycarbonate & Epoxied Materials	ABS Plastic Materials	All Other Foams, Plastics & Polymers								
Dyes (Disperse)		TP2 (1)	TP2 (1)												TP2 (1)			
Dyes (Navy Blue)																		
Flame Retardants	PROHIBITED																	
Fluorinated Greenhouse Gases	PROHIBITED																	
Formaldehyde	TP1	TP1	TP1		TP2	TP2				TP2		TP2	TP2	TP1	TP1	TP1	TP1	
Metals (Chromium VI)												TP1	TP1					
Metals (Extractable)	TP2	TP2	TP1								TP2	TP1	TP2					TP1 (3)
Metals (Nickel Release)																		TP1 (4)
Metals (Total)	TP2		TP2	TP1	TP1	TP1	TP1	TP1	TP1	TP1	TP2	TP1	TP2	TP2	TP2	TP2	TP1	TP1
Monomers									TP2									
N-Nitrosamines							TP2											
Organotin Compounds					TP1	TP1	TP1	TP1		TP1	TP1		TP1	TP1	TP1	TP1	TP1	TP1 (5)
Ortho-phenylphenol																		
Ozone-depleting Substances	PROHIBITED																	





## MATERIALS TESTING MATRIX

RESTRICTED SUBSTANCE	NATURAL FIBERS	SYNTHETIC FIBERS Nylon, PET, Etc.	NATURAL & SYNTHETIC FIBER BLENDS	PLASTICS, THERMOPLASTICS & POLYMERS							SYNTHETIC LEATHER	NATURAL LEATHER	COATED LEATHER	INKS & PAINTS	SUBLIMATION & DIGITAL PRINTS	SCREENPRINT STRIKE-OFFS	ADHESIVES	METAL ITEMS
				EVA Materials	PU Foams	PU & TPU Other than Foams & Synthetic Leather	Rubber Materials	Polycarbonate & Epoxied Materials	ABS Plastic Materials	All Other Foams, Plastics & Polymers								
PFAS Chemicals	PROHIBITED																	
Pesticides, Agricultural																		
Phthalates				TP2	TP1	TP2	TP2	TP1	TP2	TP1				TP1		TP1	TP2	
Polycyclic Aromatic Hydrocarbons (PAHs)							TP1											
Polyvinyl Chloride (PVC)	PROHIBITED																	
Quinoline																		
Solvents & Residuals (DMFa, DMAC, NMP, Formamide)				TP2		TP2 (6)					TP1		TP1				TP2	
UV Absorbers/Stabilizers (UV 320, 327, 328, 350)					TP2													
Volatile Organic Compounds (VOCs)				TP2	TP2	TP2				TP2	TP2						TP2	

### TP1 = Test Package 1

The online RSL Testing Application automatically selects this required set of tests for 4 of 5 samples.

### TP2 = Test Package 2

The online RSL Testing Application automatically selects this required set of tests for 1 of 5 samples.

- 1 Testing for Dyes is not required for white materials.
- 2 Screenprint Ink only.
- 3 Jewelry Metal items
- 4 Metal items coming into skin contact.
- 5 Testing of coated/painted Metal items only.
- 6 For PU or TPU skins/films, testing must be done after application to base material (ex: fuse or new sew package).



# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

## TEXTILES: NATURAL, SYNTHETIC & BLENDED FIBERS

The Nike RSL defines unique a unique material for textiles as any combination of:

- Material composition
- Color
- Applied chemistries or finishes
- Material supplier location

In addition, each textile type (natural, synthetic or blend compositions) in combination with a chemical finish is considered a unique material.

A difference or change in any of these properties indicates the textile has changed and may be subject to further testing.

For example, 100% cotton, 100% polyester, 60/40% cotton/poly, 50/50% cotton/poly, etc. are all unique and subject to routine and/or random testing.

Each season, suppliers must test 5% of all natural, synthetic and blended fibers, or materials composed of these fibers, on the basis of unique material/color combinations, choosing materials with the highest production volumes.

EXAMPLE: A supplier producing 100 unique material/color combinations in a season must test their top five unique material/color combinations by production volumes. This testing guidance is summarized in Figure 6 and Table 3.

NOTE: For any calculated value, the result must be rounded up to the highest whole number; for example,  
 $45 \text{ material/color combinations} \times 5\% = 2.25$ , which would require three total tests (not two).

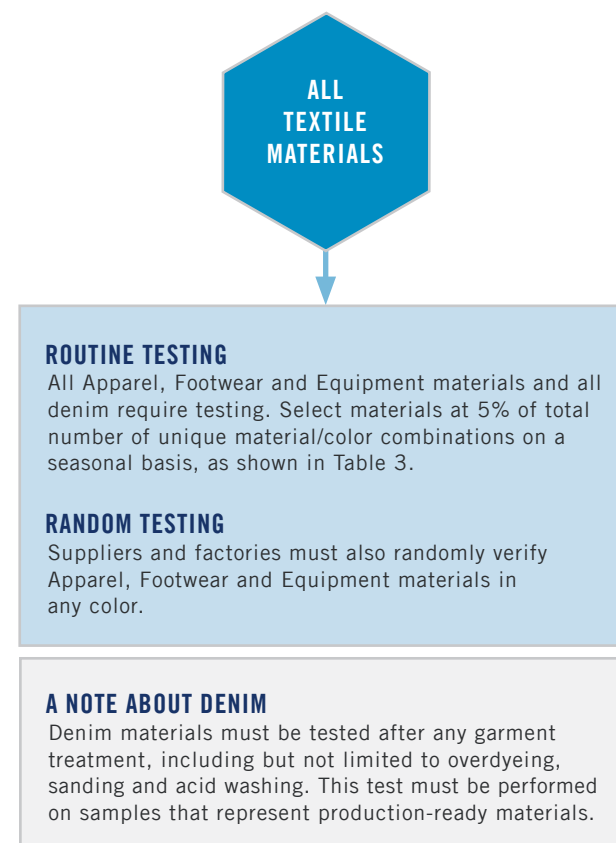
When ranking by current-season production volume isn't possible:

- Calculate the previous season's number of materials to use as a basis for the current season.
- Focus testing on higher-volume materials that haven't already passed RSL testing within the previous calendar year.

For guidance on items produced from yarn to finished good without a material phase, contact: [RSLSupport@nike.com](mailto:RSLSupport@nike.com)

Figure 6.

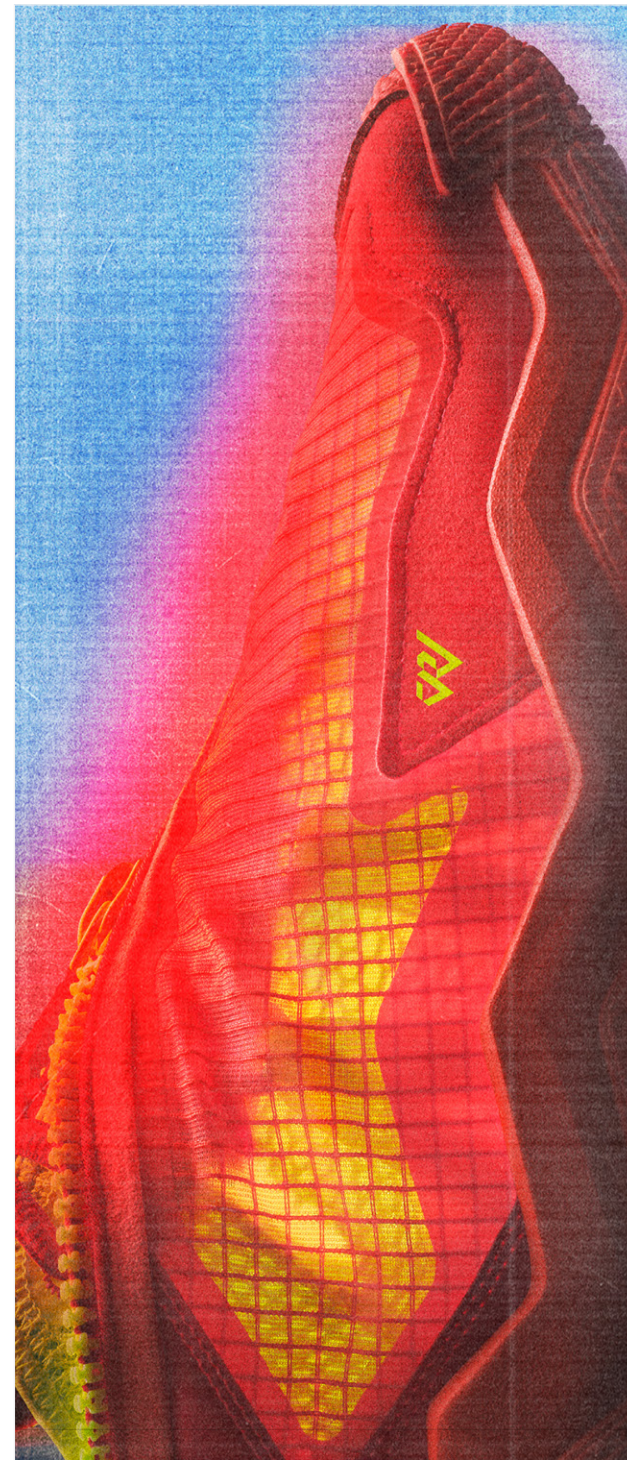
## TESTING GUIDANCE FOR TEXTILES: NATURAL, SYNTHETIC & BLENDED FIBERS



# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

Table 3.  
CALCULATING THE NUMBER OF TEST SAMPLES FOR TEXTILES

MATERIAL IDENTIFICATION	LINEAR YARDS PRODUCED	TOTAL NUMBER OF TESTS REQUIRED	TEST THIS MATERIAL?
Unique material/color combination 1	50,000	<ul style="list-style-type: none"> <li>Supplier produces 100 unique material/color combinations, as shown in Material Identification column</li> <li><b>5% Testing Requirement = Five (5) Total Tests</b></li> <li>Choose top five materials by production volume, as shown in Linear Yards Produced column</li> </ul>	Yes
Unique material/color combination 2	25,000		Yes
Unique material/color combination 3	40,000		Yes
Unique material/color combination 4	15,000		Yes
Unique material/color combination 5	60,000		Yes
Unique material/color combination 6	2,200		No
Unique material/color combination 7	1,000		No
Materials 8–100	20,000 combined		No



# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

## NATURAL LEATHER, COATED LEATHER & SYNTHETIC LEATHER

Suppliers of Leather, Coated Leather and Synthetic Leather are required to test materials based on order volumes. These volumes are for production orders only but not sample orders.

### MATERIAL DEFINITIONS & REQUIRED TESTING FREQUENCY

Suppliers are required to submit a minimum number of materials for RSL testing based on the total volume of materials supplied, as outlined below. The specific test-per-volume ratio is the “minimum testing frequency.”

Nike suggests testing each season; however, an annual frequency may be acceptable if it aligns with business practices. For the benefit of this Playbook, Nike defines these material and testing frequency requirements as follows:

- **Natural Leather.** Animal hide without a plastic or polymer coating: minimum of one test per 150,000 square feet of material.
- **Coated Leather.** Animal hide with any plastic or polymer coating or composite leather made of natural leather and a polymer additive: minimum of one test per 500,000 square feet of material.
- **Synthetic Leather.** Any base material except animal hide with a coating is considered Synthetic Leather: minimum of one test per 200,000 square meters of material.

- **Direct Skin Contact Materials.** Suppliers must test all materials that come in direct contact with the skin on an annual basis.

In addition to these minimum testing frequency requirements, suppliers should proactively test materials such as:

- R&D materials that involve new input chemistries or substantially different processing steps that the supplier has not used in manufacturing this material in the past.
- High-volume materials.
- Fluorescent colors.
- Metallic finishes or specialized performance coatings.

Table 4 shows the minimum number of passing RSL tests required, based on order volumes for Natural Leather, Coated Leather and Synthetic Leather. Note that these are minimum requirements only.

### SELECTING MATERIAL TEST SAMPLES

RSL test samples can be of any color, thickness or finish.

- Nike considers Composite Leathers or any Leather with polymer present to be a Coated Leather for the purposes of RSL testing.
- Nike encourages suppliers to submit their highest-volume production-ready materials as well as new, innovative R&D materials.

Table 4.

### MINIMUM NUMBER OF PASSING RSL TESTS REQUIRED FOR LEATHER MATERIALS

Based on order volumes for Natural Leather, Coated/ Composite Leather and Synthetic Leather

ORDER VOLUME SQUARE FEET OR SQUARE METERS	NATURAL LEATHER	COATED LEATHER	SYNTHETIC LEATHER
1 – 100	1	1	1
100,000	1	1	1
150,000	1	1	1
200,000	2	1	1
250,000	2	1	2
250,000	2	1	2
350,000	3	1	2
550,000	4	2	3
750,000	5	2	4
1,050,000	7	3	6
3,550,000	24	8	18
9,550,000	64	20	48
10,005,000	67	21	51





# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

## PLASTICS, THERMOPLASTICS, RUBBER & POLYMERS

This guidance includes EVA, PU, Rigid Plastics, Laminates, etc. Please review this information carefully, as it impacts suppliers of any type of polymer.

Please refer to the next subsection, “PU & TPU Skins or Films,” for guidance specific to those materials.

### APPAREL, FOOTWEAR AND EQUIPMENT

Nike identifies unique plastics, thermoplastics, rubber and other polymers etc. as a combination of:

- Material chemistry
- Thickness
- Material supplier location

A change to any of these properties identifies a material for routine or random testing. See Table 5 for guidance on how to determine a unique material.

Table 5.

GUIDANCE FOR DETERMINING UNIQUE PLASTIC, THERMOPLASTIC, RUBBER AND POLYMER MATERIALS

POLYMER 1	POLYMER 2	ADDITIVES	COLOR	UNIQUE MATERIAL?
50% Butadiene Rubber	50% Natural Rubber	A, B	White	Yes
60% Butadiene Rubber	40% Natural Rubber	A, B	White	Yes
60% Butadiene Rubber	40% Natural Rubber	A, B	Black	No
60% Butadiene Rubber	40% Natural Rubber	A, C	White	Yes
60% EVA	40% Natural Rubber	A, C	White	Yes
60% EVA	40% Natural Rubber	A, C	Black	No



# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

## TESTING FREQUENCY

The testing frequency for Plastics, Thermoplastics, Rubber and other Polymers depends on the end use of the materials. Please see Figure 7 for guidance.

Please refer to the subsection “PU Skins and Films” for guidance specific to those materials.

## SPECIFIC GUIDANCE FOR FOOTWEAR FACTORIES

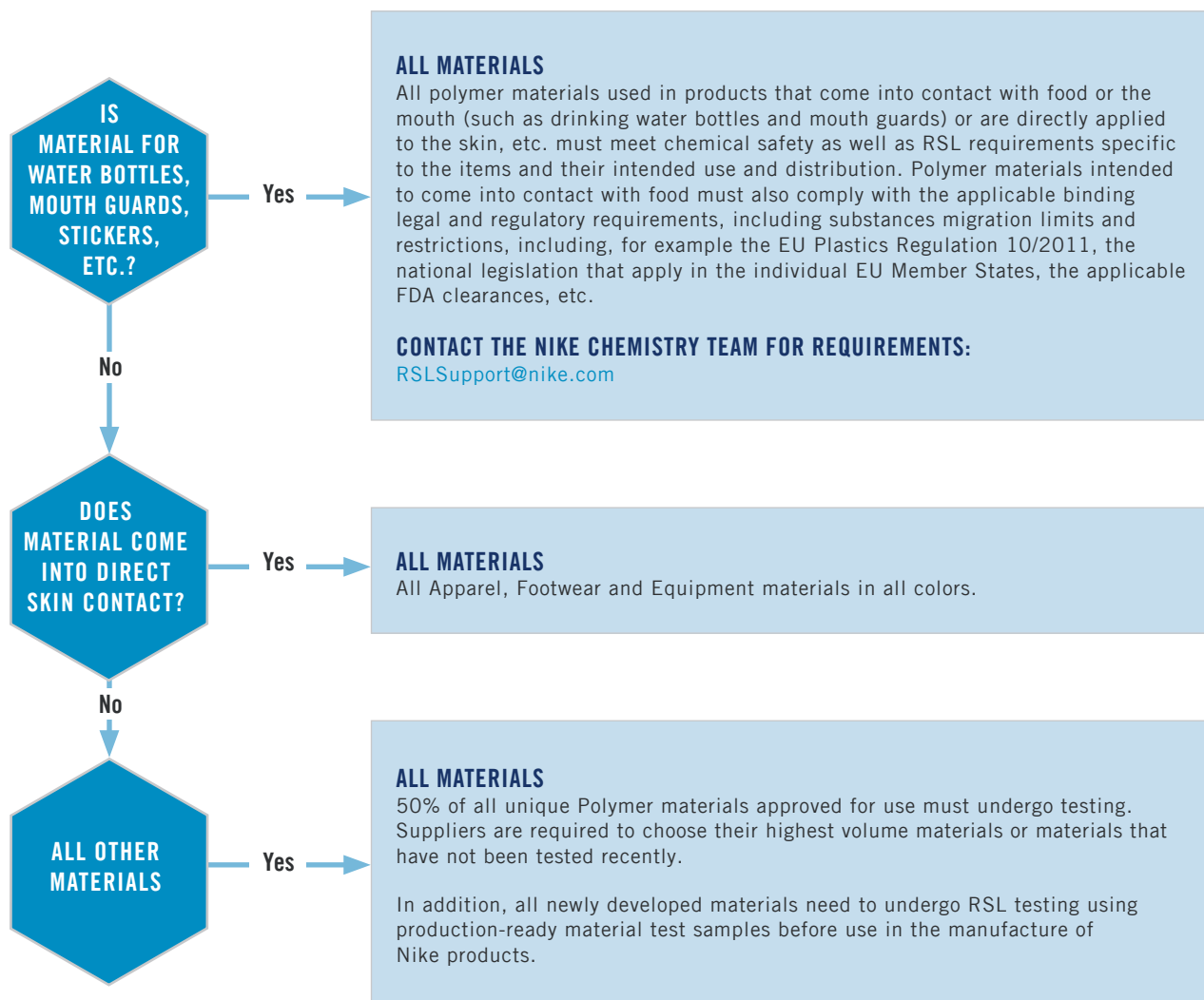
Factories must test 50% of all MCS numbers produced annually. This 50% should represent the highest volume MCS numbers. When selecting samples, please choose a variety of colors (example: MCS 1 in black, MCS 2 in white, MCS 3 in red, etc.).

**EXAMPLE:** A factory creates 20 different MCS materials in one year. The factory must submit 10 samples for testing. Note that this approach does not include color as a unique identifier.

1. Rank production volume for all MCS numbers from high to low.
2. Select the top 10 materials in the list for maximum coverage of production.
3. Select a different color for each MCS if possible.

Figure 7.

## TESTING FREQUENCY GUIDANCE FOR PLASTICS, THERMOPLASTICS, RUBBER & POLYMERS



# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

## PU & TPU SKINS OR FILMS

PU and TPU Skins or Films are thin layers of plastic film applied to an underlying substrate by processes such as heat pressing or high-frequency welding. Nike considers thin PU or TPU Skins or Films a separate material from other plastic items in the supply chain.

Nike defines a unique material for PU and TPU Skins as any combination of:

- Thickness change greater than 0.5 mm
- Additives (metallic flecks, beads, etc.)
- Finishes (waterproofing, migration-free, metallic, reflective, etc.)

Changing the color or release paper does not create a unique material unless it also changes one of the above attributes.

## MINIMUM TESTING REQUIREMENTS

Suppliers of PU or TPU Skins or Films are required to have at least one test per unique item, defined above, tested annually.

Samples submitted for RSL testing can be of any color, release-paper, etc.

- New suppliers are required to provide an RSL test for the first five materials supplied to Nike.
- Existing suppliers are required to conduct, at a minimum, one RSL test per year regardless of the quantity of material supplied.

Note that Nike or finished goods factories can request additional testing on materials at their discretion. Testing costs and logistics should be discussed beforehand.

Please contact [RSLSupport@nike.com](mailto:RSLSupport@nike.com) with any questions or concerns.

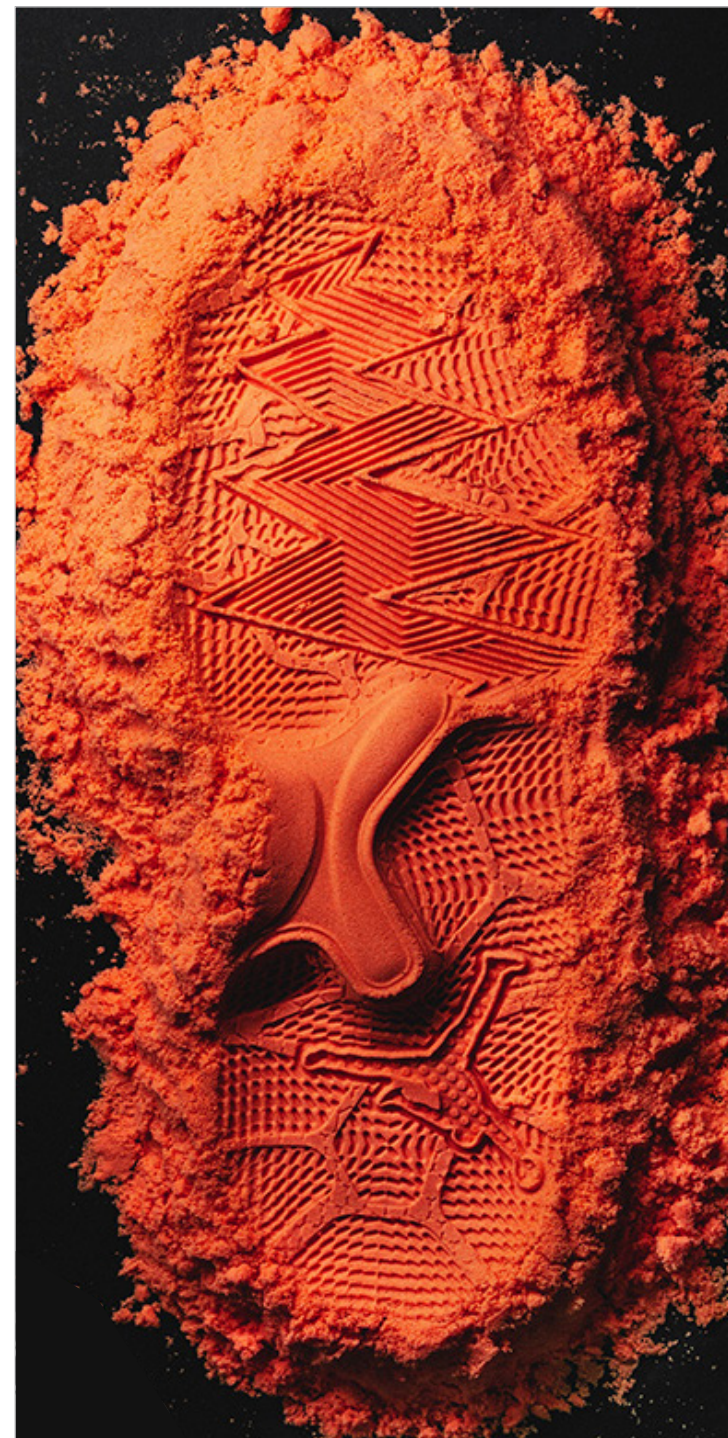
## ADDITIONAL TESTING

In addition to the minimum RSL testing requirements above, as well as direct requests for tests from factories and/or Nike teams, suppliers are encouraged to proactively test materials such as:

- New development materials
- High volume materials
- Materials with fluorescent colors

## SUBMITTING SAMPLES FOR TESTING

PU and TPU Skins and Films are tested in an “as-applied” state. Suppliers submit samples to testing labs after applying materials to an RSL-compliant substrate following standard production practices.





# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

## INKS & PAINTS

Nike considers inks and paints to be at high risk for RSL non-compliance and impacts to human health and the environment. These materials **MUST** be tested prior to production in an “as-applied” state; for example, ink that has cured, paint that has dried, etc.

All inks and paints must be tested annually and receive an RSL PASS result prior to application to any product. They must be retested every time a change is made to the color system formulation or on an annual basis, whichever comes first.

### SCREEN-PRINTING INKS

Component-based screen-printing inks consist of three main component types:

- Bases
- Pigments
- Additives

Each base, pigment and additive in a component-based screen-printing ink system must be tested at least once per year.

Suppliers must create multiple material test samples for a component-based printing system. Each printed sample should contain a single base, a single pigment and as many additives as necessary.

When submitting base color samples, print at least 10 grams on a RSL-compliant base material representative of production material and cured following the recommended curing instructions. When creating each base color sample, the pigment loading must be at the maximum recommended level per the ink manufacturer’s recommendation.

Submit material test samples of ready-to-use (RTU) ink products with no changes to the formulation. All RTU products must be dried and cured on RSL-compliant base material representative of production material and consistent with the ink manufacturer’s recommendations.

Note: Nike-Approved Laboratories do not accept composite ink samples (more than one pigment in a base color).

### DIGITAL PRINTING INKS

Digital printing inks must be tested once per year. The sample should be prepared by printing each color individually on RSL-compliant base material representative of production material. The samples must be applied with production transfer paper and on production equipment. When creating a digital printing ink test sample, print one sample for each base color – least 10 grams of ink on RSL-compliant material. For example, a CMYK digital printing ink system requires one sample for cyan, one sample for magenta, one sample for yellow, and one sample for black.

## SUBLIMATION PRINTING DYES

Sublimation prints must be tested once per year. When submitting sublimation prints to the lab, print each base color independently on one A4-sized sheet of RSL-compliant material. Create samples for each base color. For example, if four base colors are used for sublimation printing (CMYK), print one A4-sized sheet for each color.

### HEAT TRANSFER INKS

Heat transfer inks typically resemble a screen-printing ink system or a digital printing ink system. Refer to those sections for instructions.

### UNCURED INKS

If a supplier is unable to provide a cured ink sample to the RSL testing lab, please reach out to the appropriate Nike RSL lead listed at the end of the Playbook. Labs will not cure wet ink samples, so it is important that the sample submitter – whether an ink manufacturer or a printing facility – ensures the printed sample is cured properly on RSL-compliant fabric representative of production material.





# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

## SCREEN PRINT STRIKE-OFF TESTING

Nike considers screen print inks, heat transfers and similar embellishments to be at high risk for RSL non-compliance and impacts to human health and the environment. In addition to the RSL testing requirement for inks and paints, Nike requires strike-off testing of finished goods with such embellishments.

### STRIKE-OFF TESTING REQUIREMENTS

For screen prints, heat transfers and similar embellishments, suppliers must test strike-offs at a rate of 2% by style (not color) per season. Selected samples should be dark-colored or fluorescent prints.

### SAMPLE SELECTION

During a given season, a supplier may not be able to predict which styles will be the top 2% by volume, as orders may still be coming in. When this is the case, use the previous season’s order history to determine the number or strike-off tests required, and then choose styles to test based on high-volume inks and base fabrics used in the style.

WORKING EXAMPLE: As shown in Table 7, a printing house produces 148 styles in a given season. Using the 2% minimum testing requirement, the printer must submit three styles for Nike RSL testing.

- Choose the top 2% of styles by production volume for strike-off testing, rotating colorways.
- Style numbers should not include the color code.
- In the table, production volumes are added together for each order of a specific style for a given season.
- As shown, the top 3 styles by volume are selected for RSL testing – “Style 1,” “Style 4,” and “Style 5.” Round up to the nearest whole number.

Table 6.  
**REQUIRED STRIKE-OFF TESTING OF TOP 2% OF STYLES BY PRODUCTION VOLUME**  
Choose the top 2% of styles by production volume for strike-off testing, rotating colorways. Style numbers should not include the color code.

STYLES	PRODUCTION VOLUME	STRIKE-OFF TEST REQUIRED FOR THIS STYLE?
Style 1	50,000	Yes
Style 2	500	No
Style 3	20,000	No
Style 4	30,000	Yes
Style 5	40,000	Yes
Styles 6 – 148	400	No

In this example, a factory produces 148 styles:

**148 styles x 2% = 2.96**

Round up to the nearest whole number.

The top 3 styles by production volume must undergo RSL testing.

# MATERIAL-SPECIFIC IMPLEMENTATION GUIDANCE

## ADHESIVES

Nike considers adhesives (glue, bonding agents, etc.) to be at high risk for RSL non-compliance and impacts to human health and the environment. Testing is required once per year for each adhesive. RSL testing is also required prior to using any new adhesive in production.

All adhesives test samples must be in an “as applied” state, following the same curing processes that would be used in production whenever applicable.

Samples should be cured and dried on a material that allows the adhesive to be removed for testing at the laboratory. If this is not possible, application to an RSL-compliant material may be required.

If a sample cannot be fully dried before submitting it to a lab, testing on liquid samples may be possible. Contact your chosen lab to ensure they have the capacity to test samples in the liquid state. This kind of testing may be applied to (for example) low solid-content emulsions, knitting oils, cleaners, etc.

## METAL PARTS

All metal items are considered high risk for RSL non-compliance and impacts to human health and the environment. Each component must be tested annually or when a base metal is changed.

## OTHER: RHINESTONES, SEQUINS, ETC.

For any material that does not fit within established material categories, reach out to [RSLSupport@nike.com](mailto:RSLSupport@nike.com).

## JEWELRY

Items classified as jewelry have specific limits and may require specialized testing. Each item should be reviewed by the Nike RSL Team to confirm the relevant testing is performed. Please contact [RSLSupport@nike.com](mailto:RSLSupport@nike.com) prior to testing jewelry items.

## EYEWEAR FRAMES

Eyewear frames may have specific chemistry limits for some components that differ from the RSL limits in this document. Please contact [RSLSupport@nike.com](mailto:RSLSupport@nike.com) for questions regarding specific eyewear limits. Samples can be submitted following normal practice, as any limit adjustments are built into the RSL Testing application directly.

## TOYS, ELECTRONIC & ELECTRICAL EQUIPMENT, AND FOOD-CONTACT MATERIALS

The testing requirements for toys, electronics and electrical equipment (EEE) and food-contact materials differ from the testing requirements for general Nike Apparel, Footwear and Equipment products. Please reach out to the Nike Product Safety Team at [1st-product.safety.global@nike.com](mailto:1st-product.safety.global@nike.com) for further guidance on specific testing.

Because these products may also require technical files or additional labeling, please consult your Nike RSL contact when developing a product that has the characteristics of a toy, EEE or food-contact material. Additionally, to maintain both the integrity of the Nike brand, and the safety of those who use the products purchased by Nike from suppliers,

suppliers shall not make any product for Nike without first receiving written approval from the Nike Product Safety and Nike RSL Teams.

## PROMOTIONAL MERCHANDISE

All promotional merchandise bearing a Nike brand logo must meet the requirements listed in the Nike RSL and may be subject to further requirements.

Promotional merchandise should be tested according to the base material and intended use of the item. Most promotional merchandise falls into the categories described within this document and should be tested accordingly. This includes items such as customized T-shirts (screenprints), toys, EEE such as luminescent armbands, and various objects (such as water bottles, bracelets, necklaces and dog tags) that come in direct contact with the skin or mouth (leather, plastics, rubber and metal).

If you have promotional merchandise that does not clearly fit into a category within the Nike RSL or need help getting the correct (local) requirements, please contact [RSLSupport@nike.com](mailto:RSLSupport@nike.com) for assistance with the verification process.

In addition to RSL Testing, promotional giveaway items MUST be evaluated for general product compliance, including physical safety. To maintain both the integrity of the Nike brand, and the safety of those who use the products purchased by Nike from Supplier, suppliers shall not make any product for Nike without first receiving written approval from the Nike Product Safety Team. Please reach out to the Nike Product Safety Team at [1st-product.safety.global@nike.com](mailto:1st-product.safety.global@nike.com) for this evaluation.







## RULES OF THE GAME

# ELECTRICAL & ELECTRONIC EQUIPMENT

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## RSL REQUIREMENTS FOR ELECTRONICS

### OVERVIEW

Electronics are defined as electrical and electronic equipment and/or individual components dependent on electric current or electromagnetic fields to function properly and fulfill at least one of their intended functions.

### REGULATORY GUIDANCE

Each country has different legal and regulatory requirements, guidance and administrative practices for electronics that are imported and sold.

These requirements are applied depending on the type or types of electronics in the product, including but not limited to adapters, batteries, cables, and radio communication technologies (such as near field communication [NFC] tags, Bluetooth, Wi-Fi, etc.).

Suppliers are required to provide Nike with documentation such as technical data sheets, safety reports, factory ISO certifications, and other relevant information upon request.



**Electronics must comply with all applicable legal and regulatory requirements. When electronics are embedded in a product, both the electronics and the other product components must comply with applicable legal and regulatory requirements and the Nike RSL for Electronics. In addition, the non-electronic components of the product must meet Nike RSL requirements for the relevant product category.**



# RSL REQUIREMENTS FOR ELECTRONICS

## LABELING GUIDANCE

Electrical and electronic equipment and/or individual embedded components must bear all legally required and otherwise appropriate labeling for the embedded technologies. They must be accompanied by legally required safety information, in the language required by the national legislation of the country where they are placed on the market or — if not — in a language easily understood by consumers, but not limited to:

- Product safety — including suitable, clearly worded and easily comprehensible warnings and instructions for use and disposal, and any other indication or information regarding the product
- Product usage
- Chemical notifications
- Required technical information, such as output power or radiation

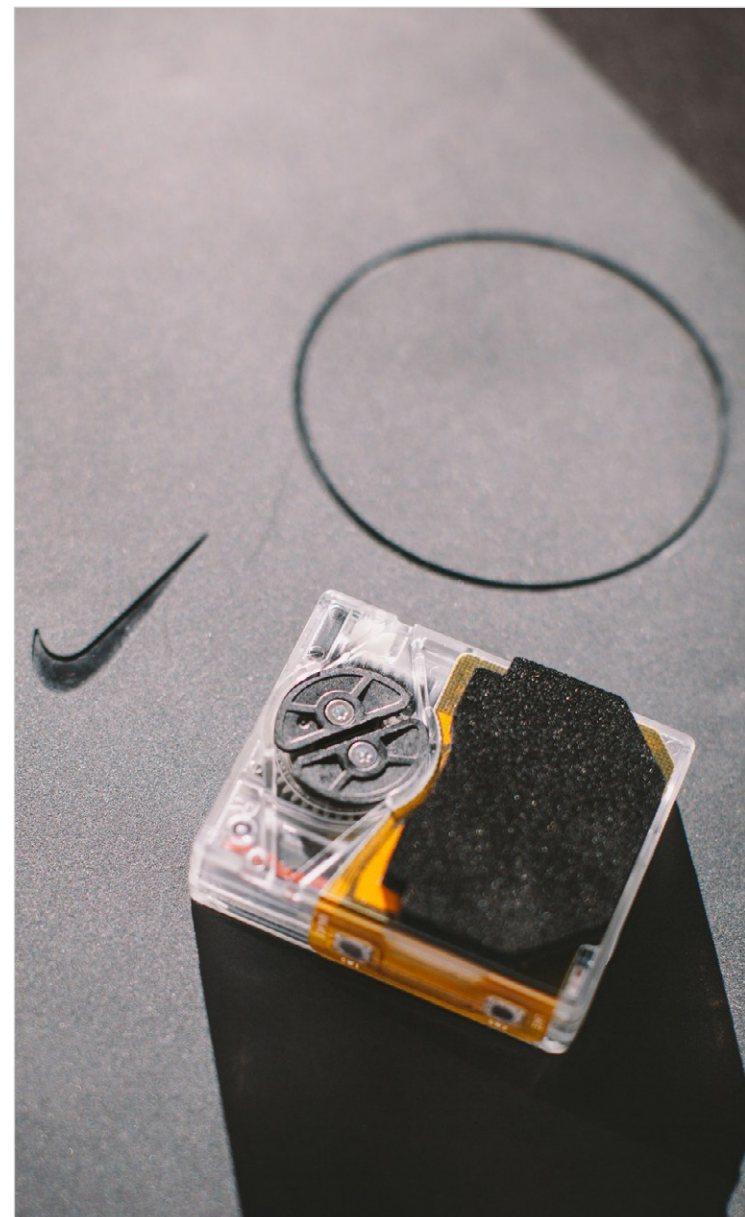
## TESTING GUIDANCE

Electronics must be assessed in accordance with applicable legal and regulatory requirements as well as internationally recognized principles of risk assessment. Nike only accepts RSL test reports from Nike-Approved Laboratories. See Contacts for a complete list.

The following is general guidance but should not be considered exhaustive:

- Electronics must comply with the applicable restrictions, specifications, limitations and declarations detailed in the Restriction of Hazardous Substances (RoHS) Directive, EU REACH, California Proposition 65 and any other relevant chemicals legislation in the country of marketing.
- The parts and components of an electrical item intended or reasonably expected to come into direct contact with the user's skin must comply with either the Nike RSL or the Nike RSL for Electronics — whichever has the lowest limit for a given chemistry.
- The parts and components of an electrical item not intended or expected to come into direct contact with the user's skin must comply with the Nike RSL for Electronics.
- In addition to chemical restrictions, the Nike Product Safety team must review the item prior to launch. Please contact the team at [lst-product.safety.global@nike.com](mailto:lst-product.safety.global@nike.com).

Testing documentation, data, and details should be kept for at least 10 years and should be made readily available upon request. All Nike RSL Test Reports are valid for 12 months from the date of testing. For further testing guidance to enable compliance, please contact the Nike Electronic Compliance Team at [electronics.compliance@nike.com](mailto:electronics.compliance@nike.com).



# NIKE RESTRICTED SUBSTANCES LIST FOR ELECTRONICS

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	SUITABLE TEST METHOD Sample Preparation & Measurement
METALS IN BATTERIES OR BUTTON CELLS				
7440-43-9	Cadmium	5 mg/kg	0.5 mg/kg	Nike in-house method
7439-92-1	Lead	1000 mg/kg	100 mg/kg	Aqua regia/hydrogen peroxide digestion, followed by ICP/ VGA-AAS analysis
7439-97-6	Mercury	Prohibited	0.5 mg/kg	
ELECTRICAL & ELECTRONIC EQUIPMENT				
	Applicable to equipment that is dependent on electric currents or electromagnetic fields to function properly; is designed for use with a voltage rating not exceeding 1000 volt AC or 1500 volt for DC; and falls under the categories set out in Annex II of Directive 2011/65/EU.			
85-68-7	Butyl benzyl phthalate (BBP)	1000 mg/kg	50 mg/kg	IEC 62321-8:2017
84-74-2	Dibutyl phthalate (DBP)	The restriction of Phthalates DEHP, BBP, DBP and DiBP shall not apply to cables or spare parts for the repair, reuse, updating of functionalities or upgrading of capacity of EEE placed on the market before July 22, 2019.		
117-81-7	Di(ethylhexyl) phthalate (DEHP)			
84-69-5	Di-isobutyl phthalate (DiBP)			
7440-43-9	Cadmium	100 mg/kg	10 mg/kg	IEC 62321-5:2013
18540-29-9	Chromium (VI)	1000 mg/kg	100 mg/kg	IEC 62321-7-1:2015 IEC 62321-7-2:2017
7439-92-1	Lead	1000 mg/kg	100 mg/kg	IEC 62321-5:2013
7439-97-6	Mercury	1000 mg/kg	100 mg/kg	IEC 62321-4:2013
Various	PBDEs and PBBs	1000 mg/kg	100 mg/kg	IEC 62321-6:2015





## RULES OF THE GAME

# TOYS

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## RSL REQUIREMENTS FOR TOYS

### OVERVIEW

A toy is defined as any product, component or material designed or intended — whether exclusively or not — for use in play by children younger than 14 years of age. This definition is broad and could possibly cover products that are not intentionally manufactured as toys, so long as they have playing value and children could reasonably be expected to use them in play.



**Toys must pass RSL testing using the “Nike Limits” stated in the Nike RSL.**

Demarcation can be made based on the products' advertising, target audience, place or mode of selling, price, presentation and marking, size, etc. In case of doubts, suppliers must consider their products as toys and comply with the related specific legal, regulatory and testing requirements. These requirements for additional scrutiny on products that may be considered toys applies to items both sold and given away, and to products that do not have Nike branding.

Toys, including the chemicals that they contain, must be safe for children and any third parties when they are used as intended or in a foreseeable way, bearing in mind the behavior of children.





# RSL REQUIREMENTS FOR TOYS

## REGULATORY GUIDANCE

Additionally, in some countries, toys are subject to specific legal and regulatory requirements — for example, positive lists of permitted substances with mandatory specific migration limits (SMLs), and/or lists of restricted or prohibited substances. Toys must comply with both Nike RSL limits, as established in this Playbook, and any applicable (local) legal and regulatory requirements. In addition, toys comprised of chemicals or chemical mixtures, such as paint sets, must also comply with relevant chemical legislation.

If suppliers have questions or concerns about the requirements that regulate the chemistry of a toy in a given country, please reach out to [lst-product.safety.global@nike.com](mailto:lst-product.safety.global@nike.com).

Toys supplied to Nike must not contain:

- Chemicals that are carcinogenic, mutagenic or toxic for reproduction (CMRs).
- Allergenic fragrances — unless they are inaccessible to children in any form when the toy is used as intended or in a foreseeable way.

Legislation is constantly changing; therefore, Nike considers it mandatory to abide by all legislation to remain compliant.

Beyond these chemical requirements, toys must also meet strict physical, mechanical, electrical, flammability and hygiene requirements.

Always consult with your Nike Product Safety contact before conducting a conformity and safety assessment of the product, or contact the Nike Product Safety Team at [lst-product.safety.global@nike.com](mailto:lst-product.safety.global@nike.com).

## TESTING GUIDANCE

Toys must be assessed in accordance with applicable legal and regulatory requirements as well as the internationally recognized principles of risk assessment. They should be tested by Nike-Approved Laboratories (find the list in “Contacts”), inline with applicable standards and the most current techniques.

Relevant standards include, but should not be considered exhaustive:

- EN 71 series of test methods
- F963-17 safety specifications for toy safety
- AfPS GS 2019:01 PAK on PAHs

Nike-Approved Laboratories can provide specific guidance.

Suppliers must conduct testing that takes into account the main characteristic of each individual toy, including but not limited to:

- The nature of the material(s) — polymeric, wood, paper, textile, leather, liquid, etc. — and the chemicals in it.
- Whether the materials are accessible to children during play.

- The foreseeable ages and behaviors of children who might use the toy.
- The vulnerability of children less than 36 months of age.

Toys must be assessed and tested taking into consideration the “precautionary principle.” In the absence of sufficient information and data to satisfactorily establish compliance with the applicable legal and regulatory requirements, and/or to demonstrate the safety of a toy and/or the chemicals in it through appropriate testing, the toy should not be considered acceptable for distribution on behalf of Nike. Testing documentation, data and details should always be kept for at least 10 years and should be made readily available upon request.

## LABELING GUIDANCE

Toys must bear all the legally required and/or otherwise appropriate labeling and and/or must be accompanied by the legally required safety information in a language easily understood by consumers and other end-users with regard to the chemicals they contain. For example, the Lead Poisoning Prevention Act (LPPA) of the U.S. state of Illinois enforces warning label provisions if the Lead content of paint on toys exceeds 40 mg/kg but is still within the U.S. federal limit of 90 mg/kg (for surface coating in Consumer Product Safety Improvement Act [CPSIA]).





## RULES OF THE GAME

# PACKAGING

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## RSL REQUIREMENTS FOR PACKAGING



### INNOVATING SUSTAINABLE PACKAGING SOLUTIONS

The chemistry in Nike's packaging must reflect our values as a company as we help to protect people and planet.

In addition to cleaner chemistries in packaging materials, Nike's Global Packaging teams are finding new ways to reduce packaging weight by a minimum of 10 percent through improved design and operational efficiencies. We're also finding ways to reuse packaging wherever possible before sending it to recycling centers.

Nike's 2025 target continues to emphasize using less packaging without compromising the performance or integrity of the product. By reducing the weight of shipping cartons used to ship product globally, Nike reduced shipping carton weight for footwear by 3.15M kg in FY22 and began a pilot to lightweight shipping cartons to be used by apparel suppliers. We plan to continue scaling this effort in FY23 and also begin to explore whether it's possible to optimize the size of lightweight apparel and accessory master outer cartons.

As a signatory to The Fashion Pact, Nike is continuing work to eliminate single-use plastics in our packaging by 2030. Nike has entered into its 3rd Generation of testing as we continue vast research on comparable options that are equitable in material integrity.

To further help reduce plastic use in our industry, Nike is sponsoring a yearlong testing phase to support finalists' solutions for the Tom Ford Plastic Innovation Prize. Testing will confirm that all materials used minimize negative social and environmental impacts, meet industry performance standards, and are market-ready by 2025.



# RSL REQUIREMENTS FOR PACKAGING

## OVERVIEW

The Nike Packaging Restricted Substances List (Packaging RSL) outlines mandatory standards, test limits and appropriate test methods for packaging materials. Nike Packaging RSL compliance helps confirm that:

- Nike packaging complies with legislative requirements.
- Nike packaging materials are not contaminated with hazardous chemistries.
- Standard test methods are used for testing packaging materials.
- Packaging is produced and designed with environmental protection in mind.

As regulatory requirements change, we will update the Nike Packaging RSL. We give suppliers as much advance warning as possible regarding changes to test limits.



**The EU “Packaging & Packaging Waste Directive 94/62/EC” defines packaging as a product made of any material of any nature, used for the containment, protection, handling, delivery and presentation of goods from the producer to the user or the consumer.**

Lastly amended by Directive (EU) 2018/852.





# RSL REQUIREMENTS FOR PACKAGING

## TESTING GUIDANCE

The Nike Packaging RSL program outlines the minimum testing required for packaging materials in the Packaging RSL Materials Testing Matrix.

During the development phase, new materials or processing may require additional PRSL testing to confirm innovation materials meet Nike's Packaging RSL requirements.

New suppliers are required to provide Packaging RSL Test Results for all materials used in Nike packaging products. All suppliers are required to provide Packaging RSL Test Reports when requested by factories or Nike teams. Nike strongly encourages suppliers to test more than the minimum number of materials listed herein against the Nike Packaging RSL limits and confirm compliance with any applicable prohibitions or restrictions.

Nike requires all new finished packaging to undergo testing in its final state. Suppliers may choose to test components before the final packaging system is submitted to address potential concerns.

Please note:

- All Packaging RSL testing must be conducted by a Nike-Approved Laboratory using the Nike RSL Testing Application.
- Suppliers are responsible for maintaining all test results, certificate information and supporting documentation for materials they source to Nike.

- Suppliers must retain all technical files and test results for a minimum of 10 years.
- Nike Packaging RSL Test Reports are valid for 12 months from the date the material was tested.
- Nike may perform random audits to monitor and confirm compliance with these standards or request testing information from suppliers at any time regarding any packaging material.
- Suppliers must complete Nike RSL training every two years.

## RECYCLED MATERIALS

Recycled packaging material streams may require additional Packaging RSL testing guidance. Reach out to [PRSL.Support@nike.com](mailto:PRSL.Support@nike.com) for specific guidance on testing recycled material sources.

## FAILURE RESOLUTION & REPORTING FOR FAILING PACKAGING TEST REPORTS

Failure resolution for packaging follows the same process as for materials. See the failure resolution flowchart in Figure 4.

In the event of a FAIL rating, suppliers must take immediate action and follow the steps outlined in the failure resolution flowchart. For further assistance, contact [PRSL.Support@nike.com](mailto:PRSL.Support@nike.com).



**Packaging RSL testing is required on an annual basis for materials used in Nike's packaging products.**



# RSL REQUIREMENTS FOR PACKAGING

## SCOPE OF THE NIKE PACKAGING RSL

All packaging materials and products must comply with the chemistry limits listed in the Nike Packaging RSL. Table 7 provides examples of in-scope packaging products. Table 8, on the next page, lists examples of material types within scope to be tested against the Nike Packaging RSL.

Note that these tables provide representative examples but should not be considered exhaustive. If you need further guidance on identifying whether your material falls within scope of Nike Packaging RSL testing, please reach out to [PRSL.Support@nike.com](mailto:PRSL.Support@nike.com).



**Nike requires that all packaging materials comply with the Packaging RSL limits listed in this document.**

Table 7.

### EXAMPLES OF PRODUCTS WITHIN THE SCOPE OF THE NIKE PACKAGING RSL

HANG TAGS	STICKERS	PROTECTIVE COVERINGS	TRIMMINGS	SALES PACKAGING	TRANSPORT PACKAGING
<ul style="list-style-type: none"> <li>• Cords</li> <li>• Foil stamps</li> <li>• Hot stamp prints</li> <li>• Paper hang tags</li> <li>• Plastic hang tags</li> <li>• Price tags</li> <li>• Spot UV hang tags</li> <li>• UPC tags</li> </ul>	<ul style="list-style-type: none"> <li>• Antimicrobial stickers</li> <li>• Labels, adhesive</li> <li>• Price tags</li> <li>• Tape</li> <li>• UPC stickers</li> <li>• RFID stickers</li> </ul>	<ul style="list-style-type: none"> <li>• Lamination, matte or gloss</li> <li>• Foam material</li> <li>• Suit bags</li> <li>• Plastic cases</li> <li>• Poly bags</li> <li>• Poly bags, zippered</li> <li>• Mesh bags</li> </ul>	<ul style="list-style-type: none"> <li>• Bead chain</li> <li>• Collar bands</li> <li>• Clips, metal</li> <li>• Clips, plastic</li> <li>• Eyelets &amp; grommets</li> <li>• Magnets</li> <li>• Pins</li> <li>• Tissue paper</li> <li>• Zippers</li> <li>• J-hooks</li> <li>• Swift-tack fasteners</li> </ul>	<ul style="list-style-type: none"> <li>• Boxes &amp; cartons</li> <li>• Gift boxes</li> <li>• Retail carry bags</li> <li>• Hangers (when sold with a clothing item)</li> <li>• Spot UV boxes</li> <li>• Suit bags</li> <li>• Thermal receipt paper</li> <li>• Tissue paper</li> <li>• UV coated boxes</li> <li>• Varnished coated boxes</li> <li>• Water-based (aqueous) lacquer-coated boxes</li> </ul>	<ul style="list-style-type: none"> <li>• Antimicrobial stickers</li> <li>• Boxes &amp; cartons</li> <li>• Corrugated shipping boxes &amp; cartons</li> <li>• J board</li> <li>• Silica gel &amp; desiccant sachets</li> <li>• Stuffing materials, expanded foam materials</li> <li>• Water-based (aqueous) lacquer-coated boxes</li> <li>• Paper bags</li> <li>• Plastic bags</li> <li>• Stretch wrap</li> <li>• Molded forms</li> </ul>





# RSL REQUIREMENTS FOR PACKAGING

Table 8.

## EXAMPLES OF PRODUCTS WITHIN THE SCOPE OF THE NIKE PACKAGING RSL

FIBERS			COATINGS, DYES & PRINTS	NATURAL MATERIALS	POLYMERS, PLASTICS, FOAMS, NATURAL RUBBER & SYNTHETIC RUBBER	METAL	GLUE	NATURAL LEATHER	SYNTHETIC COATED FABRIC
Natural	Blended	Synthetic							
<ul style="list-style-type: none"> <li>• Cotton</li> <li>• Linen</li> <li>• Silk</li> <li>• Wool</li> <li>• Lyocell (semi-synthetic)</li> <li>• Rayon (semi-synthetic)</li> <li>• Cellulose</li> </ul>	<ul style="list-style-type: none"> <li>• Cotton-Polyester</li> <li>• Ramie-Polyester</li> <li>• Wool-Nylon</li> </ul>	<ul style="list-style-type: none"> <li>• Acrylic</li> <li>• Nylon</li> <li>• Polyamide</li> <li>• Polyester</li> <li>• Polyester Acrylic</li> <li>• Nylon</li> <li>• Polyamide</li> </ul>	<ul style="list-style-type: none"> <li>• Foil stamping</li> <li>• Hot-stamp printing</li> <li>• Spot UV</li> <li>• Soft-touch coatings</li> </ul>	<ul style="list-style-type: none"> <li>• Cork</li> <li>• Paper</li> <li>• Straw</li> <li>• Stone</li> <li>• Wood</li> <li>• Cardboard</li> <li>• Molded pulp</li> </ul>	<ul style="list-style-type: none"> <li>• Acrylonitrile butadiene styrene (ABS)</li> <li>• Ethylene vinyl acetate (EVA)</li> <li>• Polystyrene (PS)</li> <li>• Polyethylene (PE)</li> <li>• Polypropylene (PP)</li> <li>• Polycarbonate (PC)</li> <li>• Polyamide (PA)</li> <li>• Polyurethane (PU)</li> <li>• Polyvinyl chloride (PVC)</li> <li>• Thermoplastic polyurethane (TPU)</li> <li>• Thermoplastic elastomer (TPE)</li> <li>• Styrene ethylene butylene styrene (SEBS)</li> <li>• Silica</li> </ul>	<ul style="list-style-type: none"> <li>• Aluminum</li> <li>• Brass</li> <li>• Copper</li> <li>• Stainless Steel</li> </ul>	<ul style="list-style-type: none"> <li>• Contact adhesive</li> <li>• Epoxies</li> <li>• Powdered adhesive</li> <li>• Flock adhesive</li> <li>• Hot melt adhesive</li> <li>• Latex glue</li> <li>• Neoprene cement</li> <li>• Polyurethane glue</li> <li>• Silicone adhesive</li> <li>• UV-cured adhesive</li> </ul>	<ul style="list-style-type: none"> <li>• Leather</li> <li>• Fur &amp; Hides</li> </ul>	<ul style="list-style-type: none"> <li>• Polyurethane (PU)</li> <li>• Polyvinyl Chloride (PVC)</li> </ul>


## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
ALKYLPHENOLS (APs) 		ALKYLPHENOL ETHOXYLATES (APEOs) 		INCLUDING ALL ISOMERS	
Various	Nonylphenol (NP), mixed isomers	Total: 100 ppm	Sum of NP & OP: 3 ppm	APEOS are used as surfactants in the production of plastics, elastomers, paper and textiles. These chemicals can be found in many processes involving foaming, emulsification, solubilization or dispersion. APEOs can be used in paper pulping, lubrication oils and plastic polymer stabilization.  APs are used as intermediaries in the manufacture of APEOs and antioxidants used to protect or stabilize polymers. Biodegradation of APEOs into APs is the main source of APs in the environment.  APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes. We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 ppm and that more time is necessary for the supply chain to phase them out completely.	Textiles and Leather: EN ISO 21084:2019 with determination of LC/MS or LC/MS/MS  Polymers and all other materials: 1 g sample/20 mL THF, sonication for 60 minutes at 70°C, analysis according to EN ISO 21084:2019
Various	Octylphenol (OP), mixed isomers				
Various	Nonylphenol ethoxylates (NPEOs)	Total: 100 ppm	Sum of NPEO & OPEO: 20 ppm		All materials except Leather: EN ISO 18254-1:2016 with determination of APEO using LC/MS or LC/MS/MS
Various	Octylphenol ethoxylates (OPEOs)				Leather: Sample prep and analysis using EN ISO 18218-1:2015 with quantification according to EN ISO 18254-1:2016





## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
AZO-AMINES & ARYLAMINE SALTS 					
92-67-1	4-Aminobiphenyl	20 ppm each	5 ppm each	<p>Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those that degrade to form the listed cleavable amines are restricted.</p> <p>Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles.</p>	<p>All materials except leather: EN ISO 14362-1:2017</p> <p>Leather: EN ISO 17234-1:2020</p> <p>p-Aminoazobenzene: All materials except leather: EN ISO 14362-3:2017</p> <p>Leather: EN ISO 17234-2:2011</p>
92-87-5	Benzidine				
95-69-2	4-Chlor-o-toluidine				
91-59-8	2-Naphthylamine				
97-56-3	o-Aminoazotoluene				
99-55-8	2-Amino-4-nitrotoluene				
106-47-8	p-Chloraniline				
615-05-4	2,4-Diaminoanisole				
101-77-9	4,4'-Diaminodiphenylmethane				
91-94-1	3,3'-Dichlorobenzidine				
119-90-4	3,3'-Dimethoxybenzidine				
119-93-7	3,3'-Dimethylbenzidine				
838-88-0	3,3'-Dimethyl-4,4'-Diaminodiphenylmethane				
120-71-8	p-Cresidine				
101-14-4	4,4'-Methylen-bis(2-chloraniline)				
101-80-4	4,4'-Oxydianiline				
139-65-1	4,4'-Thiodianiline				




## NIKE PACKAGING RESTRICTED SUBSTANCES LIST




CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
AZO-AMINES & ARYLAMINE SALTS					
95-53-4	o-Toluidine	20 ppm each	5 ppm each	See previous page	See previous page
95-80-7	2,4-Toluylendiamine				
137-17-7	2,4,5-Trimethylaniline				
95-68-1	2,4 Xylidine				
87-62-7	2,6 Xylidine				
90-04-0	2-Methoxyaniline (= o-Anisidine)				
60-09-3	p-Aminoazobenzene				
3165-93-3	4-Chloro-o-toluidinium Chloride				
553-00-4	2-Naphthylammoniumacetate				
39156-41-7	4-Methoxy-m-phenylene Diammonium Sulphate				
21436-97-5	2,4,5-Trimethylaniline Hydrochloride				



## NIKE PACKAGING RESTRICTED SUBSTANCES LIST



CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
BISPHENOLS 					
80-05-7	Bisphenol-A (BPA)	1 ppm	Individual samples: 0.1 ppm  Composite samples: 1 ppm	Bisphenols may be used in the production of epoxy resins, polycarbonate plastics, flame retardants, PVC, polyamide dye-fixing agents, and sulfone- and phenol-based leather tanning agents.  Bisphenols may be found in recycled polymeric and paper materials due to polycarbonate plastic and thermal receipt paper made with bisphenols entering waste streams.  BPS was added to the REACH SVHC list and may need to be notified to ECHA in leather goods if found above 0.1%.	All materials: Extraction: 1 g sample/20 ml THF, sonication for 60 minutes at 60°C, analysis with LC/MS
80-09-1	Bisphenol-S (BPS)	For informational purposes only.	1 ppm each		
77-40-7	Bisphenol-B (BPB)				
620-92-8	Bisphenol-F (BPF)				
1478-61-1	Bisphenol-AF (BPAF)				

## NIKE PACKAGING RESTRICTED SUBSTANCES LIST


CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
<b>BUTYLATED HYDROXYTOLUENE (BHT)</b> 					
128-37-0	Dibutylhydroxytoluene (BHT)	25 ppm	5 ppm	Used as an additive in plastics as an antioxidant to prevent aging. Can cause phenolic yellowing of textiles.	All materials: ASTM D4275: 2017
<b>DIMETHYLFUMARATE (DMFu)</b> 					
624-49-7	Dimethylfumarate (DMFu)	0.1 ppm	0.05 ppm	DMFu is an anti-mold agent used in sachets in packaging to prevent mold buildup, especially during shipping.	All materials: ISO 16186:2021
<b>FORMALDEHYDE</b> 					
50-00-0	Formaldehyde	150 ppm	16 ppm	<p>Formaldehyde can be found in polymeric resins, binders, and fixing agents for dyes and pigments, including those with fluorescent effects. It is also used as catalyst in certain printing, adhesives, and heat transfers. Formaldehyde can be used in antimicrobial applications for odor control.</p> <p>Formaldehyde found in packaging can off-gas directly onto product.</p> <p>Composite wood materials, e.g., particle board and plywood, must comply with existing California and forthcoming U.S. formaldehyde emission requirements (40 CFR 770).</p>	<p>Wood: EN 717-3: 1996</p> <p>Paper: DIN EN 645:1994 and EN 1541:2001</p> <p>Textiles, Finishings, Dyes, Inks &amp; Coatings: JIS L 1041-2011 A (Japan Law 112) or EN ISO 14184-1:2011</p> <p>Leather: EN ISO 17226-2:2019 with EN ISO 17226-1:2021 confirmation method in case of interferences.</p> <p>Alternatively, EN ISO 17226-1:2021 can be used on its own.</p>




## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
HEAVY METALS: TOTAL CONTENT 					
7440-43-9	Cadmium (Cd)	Total: 100 ppm	5 ppm	Cadmium compounds are used as pigments (especially in red, orange, yellow and green) and in paints. Also used as a stabilizer for PVC.	All materials:  Total heavy metals (Cd, Cr, Pb & Hg): DIN EN 16711-1: 2016
7439-92-1	Lead (Pb)		10 ppm	May be associated with plastics, paints, inks, pigments and surface coatings.	If the total of four heavy metals exceeds 100 ppm and Cr contributes to the sum, test for Cr VI.
7439-97-6	Mercury (Hg)		5 ppm	Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints.	This test method detects metal elements (Cd, Cr, Hg, Pb). When the final value is >100 ppm and Cr contributes to the sum, the Cr VI method described below should be used to exclude the presence of Cr VI.
18540-29-9	Chromium VI 		3 ppm	Though typically associated with leather tanning, Chromium VI also may be used in pigments, chrome plating of metals, and wood preservatives.	Metal: IEC 62321-7-1:2015 The testing lab will convert the test result into ppm.  Natural leather and natural materials: EN ISO 17075-1:2017 and EN ISO 17075-2:2017 for confirmation in case the extract causes interference. Alternatively, EN ISO 17075-2:2017 may be used on its own.  All other materials: IEC 62321-7-2:2015

## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
ORGANOTIN COMPOUNDS 					
Various	Dibutyltin (DBT)	1 ppm each	0.1 each	Class of chemicals combining tin and organics such as butyl and phenyl groups.  Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials), catalysts in plastic and glue production, and heat stabilizers in plastics/rubber.  In textiles and apparel packaging, organotins are associated with plastics/ rubber, inks, paints, metallic glitter, polyurethane products and heat transfer material.	All materials:  CEN ISO/TS 16179:2012 or EN ISO 22744-1:2020
Various	Dioctyltin (DOT)				
Various	Monobutyltin (MBT)				
Various	Tricyclohexyltin (TCyHT)				
Various	Trimethyltin (TMT)				
Various	Trioctyltin (TOT)				
Various	Tripropyltin (TPT)	0.5 ppm			
Various	Tributyltin (TBT)				
Various	Triphenyltin (TPhT)				

## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Processing for Packaging Materials	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) 					
	ALL PFAS AS MEASURED BY TOTAL ORGANIC FLUORINE			<p>Prohibited from use.</p> <p>Regulations around the world ban the use of PFAS in apparel, footwear, and packaging with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.</p> <p>PFAS has been found in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.</p> <p>Refer to this list of PFAS substances and CAS Numbers for which test methods should be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.</p>	
Various	All PFAS	100 ppm by 2025 50 ppm by 2027	50 ppm total		EN 14582:2016 or ASTM D7359:2018
	PERFLUOROOCTANE SULFONATE (PFOS) & RELATED SUBSTANCES				<p>All materials: EN ISO 23702-1 or EN 17681-1:2022 &amp; EN 17681-2:2022</p>
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1 µg/m <sup>2</sup> total	1 µg/m <sup>2</sup> total		
2795-39-3	Perfluorooctanesulfonic acid, potassium salt (PFOS-K)				
29457-72-5	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)				
29081-56-9	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH4)				
70225-14-8	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) <sub>2</sub> )				
56773-42-3	Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> )				
251099-16-8	Didecyltrimethyl ammonium perfluorooctane sulfonate (PFOS-N(C10H21)2(CH3)2)				
4151-50-2	N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)				
31506-32-8	N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)				
1691-99-2	2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)				
24448-09-7	2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)				
307-35-7	Perfluoro-1-octanesulfonyl fluoride (POSF)				
754-91-6	Perfluorooctane sulfonamide (PFOSA)				



## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)					
	PERFLUOROCTANOIC ACID (PFOA) AND ITS SALTS			Prohibited from use.  Regulations around the world ban the use of PFAS in apparel, footwear, and packaging with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.	
335-67-1	Perfluorooctanoic acid (PFOA)	25 ppb total	25 ppb total		
335-95-5	Sodium perfluorooctanoate (PFOA-Na)				
2395-00-8	Potassium perfluorooctanoate (PFOA-K)				
335-93-3	Silver perfluorooctanoate (PFOA-Ag)				
335-66-0	Perfluorooctanoyl fluoride (PFOA-F)				
3825-26-1	Ammonium pentadecafluorooctanoate (APFO)				
	PFOA-RELATED SUBSTANCES			PFAS has been found in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.  Refer to this list of PFAS substances and CAS Numbers for which test methods should be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials: EN ISO 23702-1 or EN 17681-1:2022 & 17681-2:2022
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	1000 ppb total	1000 ppb total		
376-27-2	Methyl perfluorooctanoate (Me-PFOA)				
3108-24-5	Ethyl perfluorooctanoate (Et-PFOA)				
678-39-7	Perfluorocylethanol 8:2 (8:2 FTOH)				
27905-45-9	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)				
1996-88-9	1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)				
27854-31-5	2H,2H-Perfluorodecanoic acid (H2PFDA)				





## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)					
	PFHxS-RELATED SUBSTANCES			Prohibited from use.  Regulations around the world ban the use of PFAS in apparel, footwear, and packaging with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.  PFAS has been found in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.  Refer to this list of PFAS substances and CAS Numbers for which test methods should be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials:  EN ISO 23702-1 or EN 17681-1:2022 & 17681-2:2022
68259-15-4	N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	1000 ppb total	1000 ppb total		
41997-13-1	Perfluorohexane sulfonamide (PFHxSA)				
	C9-C14 PERFLUOROCARBOXYLIC ACIDS (PFCAs) AND THEIR SALTS				
375-95-1	Perfluorononanoic Acid (PFNA, C9-PFCA)	25 ppb total	25 ppb total		
335-76-2	Perfluorodecanoic Acid (PFDA, C10-PFCA)				
2058-94-8	Perfluoroundecanoic Acid (PFUnA, C11-PFCA)				
307-55-1	Perfluorododecanoic Acid (PFDoA, C12-PFCA)				
72629-94-8	Perfluorotridecanoic Acid (PFTTrDA, C13-PFCA)				
376-06-7	Perfluorotetradecanoic Acid (PFTeDA, C14-PFCA)				
172155-07-6	Perfluoro-3-7-dimethyloctanecarboxylate (PF-3,7-DMOA)				



## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)					
	<b>C9-C14 PFCA-RELATED SUBSTANCES</b>				
17741-60-5	1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)	260 ppb total	260 ppb total	Prohibited from use.	All materials: EN ISO 23702-1 or EN 17681-1:2022 & 17681-2:2022
2144-54-9	1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)			Regulations around the world ban the use of PFAS in apparel, footwear, and packaging with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.	
865-86-1	1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)			PFAS has been found in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.	
34598-33-9	2H,2H,3H,3H-Perfluoroundecanoic acid (H4PFUnA)			Refer to this list of PFAS substances and CAS Numbers for which test methods should be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	
678-39-7	Perfluorocylethanol 8:2 (8:2 FTOH)				
39239-77-5	1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)				
120226-60-0	1H,1H,2H,2H-Perfluorododecanesulphonic acid (10:2 FTS)				
2043-54-1	1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI)				
30046-31-2	1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)				




## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	REPORTING LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)					
	PERFLUOROHXANE-1-SULPHONIC ACID (PFHxS) AND ITS SALTS			Prohibited from use.  Regulations around the world ban the use of PFAS in apparel, footwear, and packaging with partial or full exemptions for personal protective equipment and outdoor apparel for severe wet conditions.  PFAS has been found in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.  Refer to this list of PFAS substances and CAS Numbers for which test methods should be conducted to indicate whether PFAS chemistry is present above restricted levels due to intended use or unintended contamination.	All materials: EN ISO 23702-1 or EN 17681-1:2022 & 17681-2:2022
355-46-4	Perfluorohexane Sulfonic acid (PFHxS)	25 ppb total	25 ppb total		
3871-99-6	Perfluorohexane Sulfonic acid, potassium salt (PFHxS-K)				
55120-77-9	Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)				
68259-08-5	Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)				
82382-12-5	Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)				
	OTHER PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAS)				
307-24-4	Perfluorohexanoic Acid (PFHxA, C6-PFCA)	For information purposes only.  Testing recommended to assess content levels.	100 ppb total		



## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
<b>PHthalATES</b> 					
28553-12-0	Di-isononylphthalate (DINP)	500 ppm each Total: 1,000 ppm	50 ppm each	<p>Esters of ortho-phthalic acid (Phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature.</p> <p>Phthalates can be found in:</p> <ul style="list-style-type: none"> <li>• Flexible plastic components (e.g., PVC)</li> <li>• Print pastes</li> <li>• Adhesives</li> <li>• Plastic buttons</li> <li>• Plastic sleeveings</li> <li>• Polymeric coatings</li> </ul> <p>The REACH substances of very high concern (SVHC) candidate list is updated frequently. Suppliers should assume that the Nike Packaging RSL includes all Phthalates on the SVHC list—whether itemized here or not.</p>	<p>All materials:</p> <p>CPSC-CH-C1001-09.4, analysis by GC/MS</p>
117-84-0	Di-n-octylphthalate (DNOP)				
117-81-7	Di(2-ethylhexyl)-phthalate (DEHP)				
26761-40-0	Diisodecylphthalate (DIDP)				
85-68-7	Butylbenzylphthalate (BBP)				
84-74-2	Dibutylphthalate (DBP)				
84-69-5	Diisobutylphthalate (DIBP)				
84-75-3	Di-n-hexylphthalate (DnHP)				
84-66-2	Diethylphthalate (DEP)				
131-11-3	Dimethylphthalate (DMP)				
131-18-0	Di-n-pentyl phthalate (DPENP)				
84-61-7	Dicyclohexyl phthalate (DCHP)				
71888-89-6	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich				





## NIKE PACKAGING RESTRICTED SUBSTANCES LIST

CAS NO.	SUBSTANCE	NIKE LIMITS Maximum Allowable Concentration in Component	LABORATORY LIMITS Reporting Limit (For Lab Use)	POTENTIAL USES Textile Processing for Apparel & Footwear	SUITABLE TEST METHOD Sample Preparation & Measurement
<b>PHthalATES</b>					
117-82-8	Bis(2-methoxyethyl) phthalate	500 ppm each Total: 1,000 ppm	50 ppm each	<p>Esters of ortho-phthalic acid (phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature.</p> <p>Phthalates can be found in:</p> <ul style="list-style-type: none"> <li>• Flexible plastic components (e.g., PVC)</li> <li>• Print pastes</li> <li>• Adhesives</li> <li>• Plastic buttons</li> <li>• Plastic sleeveings</li> <li>• Polymeric coatings</li> </ul> <p>The REACH substances of very high concern (SVHC) candidate list is updated frequently. Suppliers should assume that the Nike Packaging RSL includes all Phthalates on the SVHC list—whether itemized here or not.</p>	<p>All materials:</p> <p>CPSC-CH-C1001-09.4, analysis by GC/MS</p>
605-50-5	Diisopentyl phthalate (DIPP)				
131-16-8	Dipropyl phthalate (DPRP)				
27554-26-3	Diisooctyl phthalate (DIOP)				
68515-50-4	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear				
71850-09-4	Diisohexyl phthalate (DIHxP)				
68515-42-4	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)				
84777-06-0	1,2-Benzenedicarboxylic acid Dipentyl ester, branched and linear				
68648-93-1	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters				
68515-51-5					
776297-69-9	n-Pentyl-isopentylphthalate (nPIPP)				

## ADDITIONAL NIKE REQUIREMENTS FOR ALL PACKAGING

ADDITIONAL REQUIREMENTS	RESOURCES
Active packaging, mold-prevention packaging	<ul style="list-style-type: none"> <li>Please contact the Nike Chemistry COE (<a href="mailto:ChemCOE@nike.com">ChemCOE@nike.com</a>) to conduct a chemical assessment on any new material, technology or process in the packaging space.</li> </ul>
Chemicals management in packaging	<ul style="list-style-type: none"> <li>EU Packaging and Packaging Waste Directive <a href="http://ec.europa.eu/environment/waste/packaging/index_en.htm">http://ec.europa.eu/environment/waste/packaging/index_en.htm</a></li> <li>Sustainable Packaging Coalition (SPC) <a href="http://www.sustainablepackaging.org">www.sustainablepackaging.org</a></li> <li>Toxics in Packaging Clearinghouse (TPCH) <a href="https://toxicsinpackaging.org">https://toxicsinpackaging.org</a></li> </ul>
Odor management	Not unpleasant (grade 2) under SNV 195651, App page 21
REACH Substances of Very High Concern (SVHCs)	<ul style="list-style-type: none"> <li>&lt; 1000 mg/kg each <a href="http://www.echa.europa.eu/candidate-list-table">www.echa.europa.eu/candidate-list-table</a></li> </ul>
Polyvinyl chloride (PVC) in coated, printed or plastic materials	<ul style="list-style-type: none"> <li>Not allowed.</li> </ul>
California Proposition 65 substances	<ul style="list-style-type: none"> <li>Every year, California publishes a list of chemicals known to the state to cause cancer or reproductive toxicity. <a href="https://oehha.ca.gov/proposition-65">https://oehha.ca.gov/proposition-65</a></li> </ul>
Oxo-degradable additives	<ul style="list-style-type: none"> <li>The EU Commission on Waste and the Ellen MacArthur Foundation consider oxodegradable and oxo-biodegradable plastics to be problematic in current recycling / circular systems.</li> </ul>
Biocides, nanoparticles, sensitizers, endocrine disruptors, etc.	<ul style="list-style-type: none"> <li>Some brands may have specific requirements regarding the use of substances of concern such as biocides, nanoparticles, sensitizers, and endocrine disruptors.</li> </ul>
Additional and upcoming packaging regulations	<ul style="list-style-type: none"> <li>The packaging regulatory space is tightly controlled and evolving at a fast pace, with several jurisdictions working on new and/or updated requirements. This includes but is not limited to:             <ul style="list-style-type: none"> <li><b>EU Packaging Directive 94/62/EC</b> gives provisions to member states on the essential requirements for packaging material (e.g. material composition). The EU will revise its Packaging Directive. <a href="http://ec.europa.eu/environment/waste/packaging/index_en.htm">http://ec.europa.eu/environment/waste/packaging/index_en.htm</a></li> <li><b>Loi AGEC</b>, France's anti-waste law, bans the use of mineral oils in ink formulations for packaging prints. <a href="https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000045733481">https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000045733481</a></li> </ul> </li> </ul>

# RSL REQUIREMENTS FOR PACKAGING

## NIKE PACKAGING RESTRICTED SUBSTANCES LIST TESTING MATRIX

SUBSTANCE	FIBERS			COATINGS, DYES & PRINTS	NATURAL MATERIALS Including paper and cardboard	POLYMERS, PLASTICS, FOAMS, NATURAL RUBBER & SYNTHETIC RUBBER	METAL	GLUE	NATURAL LEATHER	SYNTHETIC COATED FABRIC
	Natural	Blended	Synthetic							
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs), including all isomers	TP1	TP1	TP1	TP1	TP1	TP2		TP1	TP1	TP1
Azo-amines and Arylamine Salts	TP1	TP1	TP1		TP1				TP1	TP1
Bisphenols (BPA, BPS, BPB, BPF, BPAF)						TP1			TP1	TP1
Butylhydroxytoluene (BHT)										
Dimethylfumarate (DMFu)						TP2				
Formaldehyde	TP1	TP1	TP1	TP1	TP1	TP2		TP1	TP2	TP2
Heavy Metals, Total Content (Cd, CrVI, Pb, Hg) <sup>1</sup>							TP1		TP2	TP2
Organotin Compounds				TP1		TP1	TP2	TP1	TP2	TP2
Per- and Polyfluoroalkyl Substances (PFAS)	PROHIBITED									
Phthalates				TP2		TP1		TP1		TP2

<sup>1</sup> Note that Chromium VI, Cadmium, Lead and Mercury are restricted to a sum total of 100 ppm in several jurisdictions. Cadmium, Lead and Mercury are analyzed using the same method even if the risk of finding them varies across different materials.

### COLOR KEY

#### TP1 = Test Package 1

The online RSL Testing Application automatically selects this required set of tests for 4 of 5 samples.

#### TP2 = Test Package 2

The online RSL Testing Application automatically selects this required set of tests for 1 of 5 samples.

## RULES OF THE GAME

# ADDITIONAL GUIDELINES

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## ANIMAL-DERIVED MATERIALS INCLUDING ANIMAL SKINS

### OVERVIEW

This policy applies to all Nike products that contain Animal Skin materials. If an Animal Skin is not on the permitted list and is not specifically restricted, contact [Sustainable.Product@nike.com](mailto:Sustainable.Product@nike.com) to determine compliance with Nike's Animal Skins policy.

### PERMITTED ANIMAL SKINS

The following Animal Skins are permitted for use in products:

- Sheep (leather + hair-on hides / shearling; includes lamb)
- Cow (leather + hair-on hides)
- Goat
- Porcine

### SOURCE COUNTRIES

- Permitted Animal Skins may be sourced in all countries, except for China, India, and the Amazon, Cerrado, or Gran Chaco biomes as more specifically explained below.
- Products made with Animal Skins must be accompanied by the appropriate Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) or other required export certificate where applicable.





# ANIMAL-DERIVED MATERIALS INCLUDING ANIMAL SKINS

## RESTRICTIONS

### ANIMAL SKINS

- Animal Skins (specifically cow) must not be sourced in the Amazon biome.
- Animal Skins must not be considered exotic or protected. Examples include, but are not limited to, alligator, cheetah, crocodile, elephant, fish, horse, kangaroo, leopard, lion, lizard, marine mammals, ostrich, shark, snake, tiger, rays, rhinoceros, etc.
- Animal Skins must not be derived from any species of domesticated or feral dog or cat.
- Animal Skins must not be “fur,” except that cow “hair-on” hides or sheep shearling are permitted as provided above.

### WOOL

- Nike requires wool fiber certified by the Responsible Wool Standard (RWS).

### DOWN

- Nike supports down sourced from suppliers that produce it as a by-product of the meat industry. Suppliers must not supply down harvested from live birds nor sourced as a by-product of the foie gras industry.

### ANGORA RABBIT

- Nike requires that animal products are obtained in humane and responsible ways including Angora rabbit wool. This requirement precludes the use of live plucking.

### RESTRICTED BIOMES FOR LEATHER SOURCING

- Raw hides / leather used in products will not be produced from cattle raised in the Amazon, Cerrado, or Gran Chaco biomes, as defined by IBGE.
- Brazilian hide / leather suppliers are required to certify, in writing, that they are supplying hides / leather for products from cattle raised outside of the Amazon, Cerrado, and Gran Chaco biomes.
- Suppliers of Brazilian hides / leather for products must have an ongoing, traceable and transparent system to provide credible assurances that hides / leather used for products are from cattle raised outside of the Amazon biome.

If suppliers are unable to provide credible assurances that hides / leather used for products are from cattle raised outside the Amazon biome, Nike will consider increasing the exclusion area to include all of the Amazon Legal (as defined by IBGE).

## DEFINITIONS

- **Raised.** Refers to cattles' entire life.
- **IBGE.** Brazil's National Institute of Geography and Statistics.
- **Amazon Biome.** Amazon rainforest and its related ecosystem. The boundary of the Amazon Biome within Brazil is defined by the Brazilian Institute of Geography and Statistics (IBGE).
- **Amazon Legal.** The entirety of the nine Brazilian states that contain portions of the Amazon Biome (Acre, Amazonas, Roraima, Amapá, Pará, Rondônia, Mato Grosso, Tocantins and Maranhão).

# ANIMAL-DERIVED MATERIALS INCLUDING ANIMAL SKINS

## RELATED GUIDANCE

### ANIMAL WELFARE

Suppliers must source Animal Skins from processors that use sound animal husbandry and humane animal treatment / slaughtering practices whether farmed, domesticated or wild (managed).

### LEATHER WORKING GROUP (LWG)

Leather suppliers must screen tanning processes against the LWG Protocol to enable adherence to best environmental practices.

[www.leatherworkinggroup.com](http://www.leatherworkinggroup.com)

### NIKE RSL

Suppliers of Animal Skins must comply with the Nike RSL.

### TRACEABILITY

Suppliers must have the ability to trace raw hides, skins, and other materials back to country of origin.

### INTEGRITY

Animal Skins' identification of species must be accurate (i.e. scientific, Latin and common names) as appropriate for legal import/export of materials and product.

### LEGISLATION

Suppliers must meet all applicable global legislative standards that apply to Animal Skins.

### TRADE REGULATIONS

Suppliers must comply with country-specific import/export trade regulations that apply to Animal Skins.



# NANOMATERIALS

## OVERVIEW

Per European Union (EU) REACH (Regulation 2018/1881), nanomaterials are a “form of a natural or manufactured substance containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the range of 1nm – 100 nm, including also by derogation fullerenes, graphene flakes and single wall carbon nanotubes with one or more external dimensions below 1 nm.”

Nanomaterials can exhibit unique chemical and physical properties that improve the performance of products.

While nanomaterials are currently used in a wide variety of products like pharmaceuticals, electronics, and cosmetics, they can also have applications in apparel, footwear and equipment.

Understanding potential impacts to human health and the environment associated with nanomaterials can be much more complicated than the processes used for conventional materials and chemicals. The toxicity, exposure mechanisms and movement in the environment make nanomaterials unique.

Nike only allows the use of nanomaterials after an approval process in which stringent criteria must be met. These criteria apply to any substance, compound or application that includes nanomaterials intentionally used in the manufacture of a Nike material or are present in the finished product.

## CRITERIA

The following criteria are designed to make sure that impacts associated with the use of nanomaterials are minimized or eliminated.

For any nanomaterial to be approved for use it must:

- Pass a Nike chemical assessment.<sup>A</sup>
- Not intentionally or unintentionally released from a product during wear or care.
- Be proven effective in the intended application.
- Comply with relevant global regulations and be appropriately registered according to EU requirements.
- Comply with the Nike RSL and related policies.

Nike evaluates the use of nanomaterials for products on a case-by-case basis using best practices<sup>B</sup> to assess possible risks associated with specific nanomaterials for specific uses.

Nanomaterials may also be subject to additional restrictions under Nike's Odor Management policy.

## NOTES

<sup>A</sup> The Nike chemical assessment for nanomaterials may include, but is not limited to, the following:

- Evaluation of toxicity and hazard benchmarking.
- Use of nanomaterial-specific assessment frameworks and tools.
- Review of existing scientific data on nanomaterial hazards and safety.
- Evaluation of potential occupational and environmental exposures.
- Consideration of mobility and accumulation in the environment.

<sup>B</sup> See best practices for assessing hazard from the European Chemicals Agency (ECHA). <https://echa.europa.eu/regulations/nanomaterials>

# ODOR MANAGEMENT, ANTIMICROBIAL & SCENTED MATERIALS

## OVERVIEW

Nike defines odor-management technologies as chemicals, ingredients and materials that inhibit microbial growth, capture odors and / or mask odors with scents.

These include, but are not limited to, odor-management technologies identified as biocides, biostats, antibacterials, antimicrobials, odor capture and scented items / ingredients.

Odor-management technologies can offer benefits for athletic apparel, footwear and equipment. However, these technologies need to be carefully assessed to understand the implications of their use. Nike only allows the use of odor-management technologies after an approval process in which very stringent legal criteria must be met. These criteria apply to any odor-management technologies that are applied to or are included with a product.

In addition to odor-management technologies, any substance added to infer a scent/smell in any material must be reviewed following this same approach.

Some jurisdictions require disclosures with the products when certain odor management, antimicrobial or scented materials are used. Consult your Product Safety contact or the Nike Product Safety Team at [1st-product.safety.global@nike.com](mailto:1st-product.safety.global@nike.com) for advice on appropriate disclosures.

## CRITERIA

The following non-exhaustive criteria are designed to make sure that the chances of any impacts associated with the use of odor-management technologies are minimized, if not eliminated. For any odor-management technology to be considered, it must:

- Be proven effective for our product types.
- Pass a Nike chemical assessment.<sup>A</sup>
- Comply with the Nike RSL and related policies.<sup>B</sup>
- Not leach or release chemicals during wear or care to impart an antimicrobial effect.
- Meet all relevant global legislative requirements and applicable standards, including approval of any active substances or authorization of any biocidal products for use in treated articles in accordance with the EU Biocidal Products Regulation (BPR, Regulation [EU] 528/2012).
- Be listed on the bluesign® bluefinder when applicable.

## RESTRICTIONS

Nike has previously identified specific odor-management technologies that do not comply with one or more of our restrictions. These include the following odor-management technologies that are known to intentionally release substances to be effective:

- Copper
- Silver

- Organotins
- Triclosan
- Pentachlorophenol
- Dimethylfumerate

Odor-management technologies that contain these chemicals are prohibited for Nike products. Odor-management technologies may also be subject to additional restrictions under Nike's Nanomaterials policy.

## NOTES

**A** The Nike chemical assessment for odor-management technologies includes, but is not limited to:

- Evaluation of toxicity and hazard benchmarking.
- Evaluation of potential occupational exposures and necessary controls.
- Evaluation of possible manufacturing impacts associated with environmental release.
- Consideration of release and accumulation in the environment.

**B** To maintain both the integrity of the Nike brand, and the safety of those who use the products purchased by Nike from Supplier, suppliers shall not make any scented items, perfumes and related cosmetic products for Nike without first receiving written approval from the Nike Product Safety Team. Please reach out to [1st-product.safety.global@nike.com](mailto:1st-product.safety.global@nike.com).



# RECYCLED MATERIALS

## OVERVIEW

Move to Zero is Nike's journey to help protect the future of sport. This environmental footprint-reduction program led to the product creation principles of selecting better materials, using less of them and creating better product.

Recycled materials allow material that has been discarded to be diverted from waste streams and be used to reduce our reliance on using new, virgin feedstocks — helping us both to “select better” and “use less” materials.

Subject to specific legal and regulatory requirements that may exist in some jurisdictions where recycled materials are used, Nike considers a recycled material to be a material that was diverted from a waste stream (post-industrial or post-consumer) and reprocessed into a new material.

Recycled materials include any material that is repurposed, reused, reclaimed or refurbished for the intentional purpose of being incorporated into new products. Nike constantly strives to incorporate recycled and upcycled materials into products. Whether these materials are from post-consumer or post-industrial sources, Nike RSL requirements still apply to recycled content from any source.

Our vision is a circular future, where we try to eliminate waste at the origin, optimize manufacturing processes and help reduce environmental impact. Maximizing the use of recycled materials throughout our supply chain helps close in on that vision.

## RECYCLING CERTIFICATION

Nike requires suppliers of recycled content to be certified to the Textiles Exchange Global Recycled Standard or the Recycled Claim Standard. Suppliers of recycled and/or organic textiles or yarn must have related up-to-date scope certificates, renewed annually. Upon request, suppliers must provide Nike with certifications. To get certified, visit [www.textileexchange.org](http://www.textileexchange.org) or [www.global-standard.org](http://www.global-standard.org).

These certifications help Nike to trace chain of custody for certified materials, enable product authenticity, drive environmental and social improvements deeper in the supply chain, and provide transparency when requested by consumers, regulators, and marketplace partners.

## NIKE RSL REQUIREMENTS FOR RECYCLED MATERIALS

All recycled materials must comply with RSL limits and any applicable legal and regulatory requirements. If suppliers have any questions, please reach out to [RSLSupport@nike.com](mailto:RSLSupport@nike.com).

Nike requires chemical assessments for all materials going into product, including recycled materials.

## TEST PACKAGES

Nike's RSL Test Packages are derived from historical testing of specific material streams. Test Packages are updated routinely and are informed by internal testing results and industry collaboration.



**Nike requires all new recycled materials to go through chemical assessment and RSL testing before being used in a finished product.**

Material streams from new sources, such as recycling from other industries, presents the need for additional scrutiny around chemical compliance. For recycled, upcycled and even new bio-based materials, specific RSL Test Packages need to be designed based on the specific input stream. Reach out to [RSLSupport@nike.com](mailto:RSLSupport@nike.com) for guidance on selecting an appropriate Test Package.

## TESTING FREQUENCY

Recommended RSL testing frequencies for the multiple materials Nike uses are based on the assumption that the materials are uniform and homogeneous. When using recycled content, this is not necessarily the case. It is therefore important to reach out to [RSLSupport@nike.com](mailto:RSLSupport@nike.com) for guidance on how often to test these materials against the Nike RSL.

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# CONTACTS

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